

The Mining Journal.

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The Mining Journal is Registered at the General Post Office as a Newspaper and for Transmission Abroad.]

No. 2440.—Vol. LII.

LONDON, SATURDAY, MAY 27, 1882.

[WITH SUPPLEMENT.] PRICE SIXPENCE PER ANNUM, BY POST £1 4s

MR. JAMES H. CROFTS, STOCK AND SHARE BROKER AND MINING SHARE DEALER.
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.
ESTABLISHED 1842.

BUSINESS transacted in all descriptions of MINING Stocks and Shares (British and Foreign), Consols, Bonds (Foreign and Colonial), Railways, Insurance, Assurance, Telegraph, Tramway, Shipping, Canal, Gas, Water, and Dock Shares, and all Miscellaneous Shares.
Business negotiated in Stocks and Shares not having a general market value.

Every Friday a general and reliable List issued (a copy of which will be forwarded on application), containing closing prices of the week.

MINES INSPECTED.
BANKERS: CITY BANK, LONDON—SOUTH CORNWALL BANK, ST. AUSTELL.

SPECIAL DEALINGS in the following, or part:—
50 Arendal, 25s. 50 Gold Coast, £13½. 50 Parys Copper, 10s. 3d.
75 Almaden, 12s. 60 Grogwinton, 9s. 9d. 100 Prince of Wales, 9s.
25 Bedford United, 39s. 15 Gwydyr Amal., off. w. 50 Panullicillo, £26½.
25 Bratsberg, 33s. 35 Hingston Down, 18s. 9 50 Pestarena, 4s. 9d.
25 Bwch United, 15s. 75 Herodfoot, 2s. 6d. 50 Ruby, £3.
10 Cardiff & Swansea, 22 7s. 6d. 50 Rhodri Reef, 16s. 6d. 50 Roman Gravel, £28 7 6
50 Carnarvon Cop., 13s. 9 100 La Plata, £2 1s. 3d. 10 S. Condurow, £28½.
75 Callao Bis, 10s. 6d. 300 Langford, 6s. 6d. 50 So. Devon, 17s. 6d.
50 Consolidated, 5s. 3d. 100 Last Chance, 10s. 25 S. E. Wynad, £2 8s. 9
25 D'Esby Mount, 13s. 9 20 Leadhills, £24½. 50 Santa Barbara, 19s.
25 Derwent, off. wtd. 25 Monte Consols, 20s. 25 So. Devon, 17s. 6d.
10 Devon Con., £7½. 50 Morfa Du, 7s. 6d. 100 Sortridge, 4s. 6d.
50 Devon Friend., 6s. 50 Mysoor Gold, 12s. 6d. 50 Tanker. Gt. Con., 5s.
50 Don Pedro, 6s. 50 Mysoor Reef, 4s. 50 Uni. Van Con., 12s.
50 Drakeville, 13s. 9d. 250 No. Herodfoot, off. w. 50 West Phoenix, 20s.
100 East Blue Hills, 12s. 6 75 Nouv. Monde, 6s. 6d. 50 West Caradon, 8s. 9d.
50 East Caradon, 9s. 20 No. Penstruthal, 10s. 75 West Crebor, 11s. 6d.
45 E. Chiverton, 28s. 9d. 100 New W. Caradon, 3s. 3 20 West Polbreon, 22s. 6
30 East Lovell, £1½. 50 Pioneer, 12s. 50 Wheel Crebor, £2 2 6
120 E. Roman Gravel, 12s. 6 50 Pandora, 5s. 15 West Kitty, £2 8s. 9d.
50 English Australian Gold, 10s. 6d. 40 Polrose, 3s. 9d. 100 Wheel Jewell, 5s.
50 Frontino, £2½. 50 Port Phillip, 3s. 9d. 20 Wheel Kitty, £1½.
40 Glenrock, 22s. 6d. 50 Potosi, 15s.
50 Glenroy, 6s.

* * SHARES SOLD FOR FORWARD DELIVERY (ONE, TWO, OR THREE MONTHS) ON DEPOSIT OF TWENTY PER CENT.
* * SPECIAL BUSINESS at CLOSE PRICES in all Market TIN, COPPER and LEAD SHARES.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

ELECTRIC LIGHT SHARES—SPECIAL BUSINESS in Anglo American Brush, Brush Electric of Scotland, Western Brush, Midland Brush, Electric Light and Power Generator, Hammond, &c.
Shares sold for cash, account, or for forward delivery (one, two, or three months) on deposit of 20 per cent.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

WEST DEVON CONSOLS.—SPECIAL BUSINESS in the shares.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

RAILWAYS—FOREIGN BONDS—SPECIAL BUSINESS.
Fortnightly Accounts opened on receipt of the usual cover.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

AMERICAN AND CANADIAN STOCKS AND SHARES—SPECIAL BUSINESS.
Fortnightly Accounts opened on receipt of the usual cover.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

INDIAN GOLD MINES.—SPECIAL BUSINESS in:—
Cootacivil. Indian Trevelyan. Rhodes Reef.
Devala Moyer. Mysore. South-East Wynad.
Devala Central. Mysore Reefs. South Indian Glenrock.
Indian Phoenix. Oregano. Tambracherry.
Indian Kingston. Oregano. Wynad Perseverance.

At CLOSE MARKET PRICES, free of commission.
* * Reliable information given on any of the above. A daily price list issued with closing quotations. SPECIAL BUSINESS in La Plata, Rio Tinto, rutino and Bolivia, Potosi, Ruby, Nouveau Monde, and Richmond.

* * SHARES IN THE ABOVE INDIAN OR OTHER GOLD AND SILVER MINES SOLD FOR FORWARD DELIVERY ONE, TWO, OR THREE MONTHS ON DEPOSIT OF TWENTY PER CENT.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.
ESTABLISHED 1842.

MR. W. H. BUMPUS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER.
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ESTABLISHED 1867.

BUSINESS transacted in STOCK EXCHANGE SECURITIES and MISCELLANEOUS SHARES of every description. RAILWAYS, BANKS, FOREIGN AND COLONIAL BONDS. TRAMWAYS, TELEGRAPHS, and all the LEADING INVESTMENTS. Accounts opened for the Fortnightly Settlement.

A List of Investments free on application.
Mr. BUMPUS has SPECIAL BUSINESS in the undermentioned:—

50 Almaden, 12s. 6 30 Frontino, £2½. 100 Port Phillip, 3s. 9d.
40 Bratsberg, 33s. 15 Great Holway, £25½. 50 Potosi, 14s. 6d.
10 Callao Bis, 10s. 9d. 100 Gold Coast, £13½. 50 Parys Copper, 10s. 3d.
30 Carn Brea. 35 Gwynon, 11s. 6d. 25 Parys Copper, 12s.
50 Carnarvon, 13s. 9 100 Grogwinton, 9s. 9d. 70 Prince of Wales, 9s.
2 Cape Copper, £25½. 100 Herodfoot (offer wanted). 50 Rhodes Reef, 16s. 6d.
25 Copiapo, £2½. 50 Indian Glenrock, 19s. 6d. 10 S. Condurow, £28½.
40 Colorado, 35s. 100 Indian Trevelyan, 13s. 6d. 50 Tregembo, 6s.
100 Devala-Moyer, 22s. 6d 100 Indian Trevelyan, 13s. 6d. 100 Tankerville, 5s. 6d.
1 Dolcoath. 75 Indian Phoenix, 25s. 6 15 Van, £8.
15 Devon Consols, £7½. 25 Leadhills, £2 7s. 50 Wheel Jewell, 5s. 6d.
20 Derwent, 16s. 6d. 10 Mona, £2½. 10 West Kitty, £2½.
100 Don Pedro, 7s. 6d. 100 Mysoor Gold, 12s. 6d. 15 Wh. Grenville, £10½.
50 E. Roman Gravel, 12s. 6d. 40 New Kitty. 50 West Devon Consols.
150 Eberhardt, 12s. 100 Nouv. Monde, 6s. 9d. 15 Wheel Crebor, £2½.
50 East Blue Hills, 12s. 70 New Trumpet, 21s.

SPECIAL BUSINESS, at close prices, in the SHARES of all the principal HOME and FOREIGN MINES.

IMPORTANT TO INVESTORS.—Shares in SOUND DIVIDEND and PROGRESSIVE MINES (particularly TIN and COPPER) should be bought at present prices, as many of them are likely to have a considerable rise within the next few months.

Mr. BUMPUS devotes special attention to these Securities, and is in a position to afford reliable information and advice to intending investors and others.

WHEEL GRENVILLE and WEST GODOLPHIN shares are recommended for investment at present prices.

WILLIAM HENRY BUMPUS, SWORN BROKER.
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MR. JOHN RISLEY, STOCK AND SHARE BROKER,
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West Caradon, New West Caradon, Polrose, Sortridge, Parys, Wheel Crebor, and West Crebor. The shares in the above mines are quoted ridiculously low, and if investors succeed in buying at present quotations they may confidently anticipate gaining from 300 to 500 per cent. profit on their outlay within 12 months.

BANKERS: LONDON AND WESTMINSTER (Lothbury).

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AUSTIN PRIARS,
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BANKERS: THE ALLIANCE BANK (Limited).

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Mr. ALFRED E. COOKE can sell the following lots (or any smaller number of shares) to immediate applicants at prices annexed, free of commission.

Where prices are not inserted, the market price of the day will be taken, or offers may be made:—

30 Bedford Uni. Cop., 41s. 50 Indian Glenrock Gold 40 Parys Copper, 9s. 9d.
20 Bratsberg Cop., 33s. 6 20s. 10 R. Gravel Lead, £2½.
50 Carnarvon Cop., 11s. 50 Indian Trevelyan 10 Richmond Silver, 8½.
35 Callao-Bis Gold, 10s. Gold, 13s. 6d. 20 Ruby, £2½.
50 Devala Gold, 21s. 90 La Plata Lead, £2 25 So. Devon Copper, 15s.
80 Devon Friend., 5s. 6d. 35 Leadhills, £2½. 50 South-East Wynad Gold, 4s.
50 Devon Gt. Uni. 12s. 6 30 Langford Silver, 7s. 80 Sortridge Copper and Tin, 4s. 3d.
5 Devon Con. Copper. 60 Mona Con. Cop., 20s. 50 Tanker. Gt. Con., 5s. 6
45 Don Pedro Gold. 10 Morfa Du, 7s. 20 Van and Glyn Lead, 10s.
90 Drakeville Tin and 20 Mysoor Gold. 50 West Kitty Tin, £2½.
Copper, 12s. 6d. 130 New West Caradon 20 West Phoenix Tin and Copper.
10 East Lovell Tin, £1½. Copper, 3s. 3d. 10 West Kitty Tin, £2½.
50 East Roman Gravel 200 Nouveau Monde Gold, 20 W. Polbreon Tin, 22s. 6
Lead, 12s. 5s. 6d. 25 Wheel Jane Tin, 20s. 5 Wheel Agar Tin.
15 East Rose Lead. 45 No. D'Esby Lead. 10 Wheel Crebor Copper, £2½.
135 East Blue Hills Tin, 50 No. Herodfoot, 3s. 9d. 45 W. Lisburne Lead, 20s.
10s. 9d. 300 Nouveau Monde Gold, 5s. 6d. 190 W. Devon Cop., 8s.
30 Eng. Australian Gold 45 No. D'Esby Lead. 50 Potosi Gold, 13s. 9d.
10s. 45 No. D'Esby Lead. 30 Pioneer Copper and Lead, 12s. 6
40 Frontino Gold, £2½. 50 Potosi Gold, 13s. 9d. 80 Prince of Wales Cop. 8s. 6d.
50 Gawton Copper, 10s. 6 30 Pioneer Copper and Lead, 12s. 6
25 Gunnislake (Clitters). Copper.

150 Hoover Hill, 5s.

Many of the above shares can be sold for settlement by arrangement at the mid-June or end of July account on payment of 20 per cent. deposit. Shares not found in the above list may be purchased on application.

SPECIAL NOTICE.—SHARES in all MINES and STOCKS and SECURITIES of EVERY DESCRIPTION can be supplied at LOWEST POSSIBLE NET PRICES for CASH, ACCOUNT, or FORWARD DELIVERY.

Mr. ALFRED E. COOKE is buyer of shares in all the LEADING MINES at current market prices.

FOREIGN STOCKS, ENGLISH AND AMERICAN RAILWAYS.

TELEGRAMS and LETTERS receive immediate attention. All shares currently dealt in, bought and sold, free of commission.

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SPECIAL BUSINESS. BEDFORD UNITED. WEST DEVON GREAT CONSOLS. WEST CREBOR. INDIAN MINES. BRITISH MINES. ELECTRIC LIGHTS.

SPECULATIVE ACCOUNTS OPENED ON RECEIPT OF COVER.

SHARES BOUGHT AND SOLD AT CLOSEST NET PRICES.

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(Opposite the Stock Exchange, with which the offices are in DIRECT TELEGRAPHIC COMMUNICATION.)

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Has special business in the following for cash or settlement by arrangement:—

Bratsberg, 32s. 50 Hoover Hill, 4s. 6d. 50 Potosi, 14s. 6d.
Bedford United, 38s. 9d. 100 Indian Glenrock, 19s. 6d. 50 Parys Copper, 10s. 3d.
Bwch, 12s. 100 Callao-Bis Gold, 10s. 35 Callao-Bis Gold, 10s.
Chili Gold, 7s. 6d. Kapanga. 50 Sortridge, 4s. 6d.
Clitters, £2½. 50 Devala Gold, 21s. 90 La Plata Lead, £2 25 So. Devon Copper, 15s.
Consolidated, 4s. 9d. La Plata, 40s. 35 Leadhills, £2½. 50 South-East Wynad Gold, 4s.
Devon Friendship, 5s. 6 50 Devala Moyer, 22s. 6d. 30 Langford Silver, 7s. 80 Sortridge Copper and Tin, 4s. 3d.
Devala Moyer, 22s. 6d. 60 Mona Con. Cop., 20s. 50 Tanker. Gt. Con., 5s. 6
Don Pedro, 6s. New Kitty, 35s. 9d. 10 Morfa Du, 7s. 20 Van and Glyn Lead, 10s.
Eberhardt, 12s. 100 Nouveau Monde, 5s. 9d. 20 Mysoor Gold. 50 West Kitty Tin, £2½.
East Blue Hills, 11s. 3d. Organo, 17s. 6d. 130 New West Caradon 20 W. Polbreon Tin, 22s. 6
East Caradon, 7s. 6d. Parys Corporation 9s. 9 25 Wheel Jane Tin, 20s. 5 Wheel Agar Tin.
East Chiverton, 35s. Prince of Wales, 8s. 6d. 45 W. Lisburne Lead, 20s.
8s. 6d. 190 W. Devon Cop., 8s.

BANKERS: LONDON AND WESTMINSTER.

ABBOTT AND CO., STOCK AND SHARE BROKERS,

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May Circular on application.

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30 Bedford Unit., 37s. 6 20 Glenroy, 4s. 40 South Crebor.
25 Bwch United, 12s. 50 Indian Glenrock Gold 50 South Darren, 14s.
75 Corporation South 100 Sortridge Con., 4s. 6d
Australian Copper. 18s. 9d. 50 Tamar.
50 Carnarvon Cop., 12s. 6 20 Leadhills, £2½. 20 Tollima A, £2½.
50 Callao Bis, 10s. 10 Lovell Tin, off. wtd. 10 do. B, £1½.
50 Carn Camborne. 20 Mona, £2½. 40 United Van Con., 11s. 3
30 Carnarvonshire Con. 25 No. Herodfoot, 3s. 6d 100 West Crebor, 11s. 6d.
75 Don Pedro, 6s. 3d. 25 N. Trumpet Con. 75 West Lisburne, 17s. 6d
100 Devon Great Uni., 12s 100 Organo Gold, 18s. 6d. 50 West Devon.
50 Dev. Friendship, 5s. 9 50 P. of Wales, 9s. 3d. 20 Wheel Crebor, £2½.
100 Exchequer, 3s. 3d. 50 Parys Corpora., 10s. 3 20 Ystwith, 12s.
50 Eberhardt, 12s. 6d. 100 Rosa Grande, 2s. 3d.

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175 Almaden and Tiritio. 210 La Plata, £2 1s. 30 South Crebor.
120 Bratsberg. 40 Mona. 60 Tamar Silver-Lead.
120 Bedford United. 50 Mount's Bay, 8s. 60 Tankerville.
50 Carn Camborne. 200 Michipicoten, 20s. 100 Treavean.
240 Devon Friendship. 100 Organo Gold. 25 Van.
100 Derwent. 90 Parys Mountain. 160 West Crebor.
40 Devon Great Consols. 110 Prince of Wales. 220 West Caradon.
250 East Wheel Rose. 70 Pely Wood. 130 West Devon.
110 East Blue Hills. 70 Richmond. 100 Wheel Crebor.
100 Frongoch. 70 Rhodri Reef. 100 Wheel Jewell, 4s.
280 Great Polgooth. 20 Roman Gravel. 100 West Phoenix, 15s. 6d.
50 Gunnislake (Clitters). 120 South Darren. 25 Walkham.

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100 Birdseye Creek. 10 Frongoch. 50 Prince of Wales.
50 Bedford. 20 Gunnislake (Clitters). 150 Sortridge Consols.
30 Bratsberg. 50 Guinea Coast. 100 Parys Copper.
100 British Australian. 150 Gawton. 60 South-East Wynad.
100 Consolidated. 20 Goglian. 50 South Devon.
50 Canada. 100 Gold Hill. 25 South Tolarne.
100 Don Pedro. 50 Hingston Down. 15 Trevaunance United.
10 Devon Consols. 40 Herodfoot. 20 Tollima.
50 Devon Friendship. 150 Kirkmichael. 100 West Crebor.
50 Drakeville. 90 Killifreth. 100 West Caradon.
100 East Blue Hills. 90 Kapanga. 50 West Polbreon.
100 East Caradon. 200 Langford. 5 West Kitty.
10 East Chiverton. 50 La Plata. 75 Wheel Crebor.
50 East Roman Gravel. 50 Mounts Bay. 40 Wheel Jane.
200 Exchequer. 70 New West Caradon. 40 West Jane.
200 Eberhardt. 50 New Kitty. 20 Ystwith.

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Registration of New Companies.

The following joint-stock companies have been duly registered:—

THE ST. TUDWAL'S GRANITE COMPANY (Limited).—Capital, 20,000*l.*, in shares of 1*l.* To purchase from the Liverpool Granite Company (Limited) their interest in certain quarries and lands situate at Llanbedrog, Carnarvon, and to continue the business of quarrymen, workers in stone, &c. The subscribers (who take one share each) are—H. Stevens, Northwich; A. S. Leich, Manchester; W. Whitehead, Openshaw; C. Hall, Manchester; G. Hampson, Manchester; C. H. Watkinson, Manchester; W. H. Brookes, Openshaw.

THE ELECTRIC LIGHT AND POWER SHARE TRUST (Limited).—Capital, 1,000,000*l.*, in shares of 2*l.* To acquire, hold, sell, mortgage, or otherwise deal with shares, stock, and debentures of electric light power and other companies. The subscribers (who take one share each) are—J. Benshens, 6, Corinne-court; J. F. Freagar, Walthamstow; F. Perry, Mincing-lane; W. W. Bird, Fulham; G. C. Harvey, Anerley; W. H. Robinson, Brixton; C. F. Ince, 1, Church-court.

THE IBERIAN ELECTRIC COMPANY (Limited).—Capital, 10,000*l.*, in shares of 10*l.* To purchase and work certain patents for Spain, Portugal, and their Colonies. The subscribers (who take one share each) are—R. S. Ward, 24, Grafton-street; H. Leaver, 133, Gray's Inn-road; J. E. Costello, 20, Bucklersbury; A. J. Davis, 19, Queen Victoria-street; T. Jervis, 28, King-street; L. Bishop, 99, Cannon-street; W. Plat, 14, St. Mark's-crescent.

THE BRITISH ESPARTO SUPPLY COMPANY (Limited).—Capital 100,000*l.*, in shares of 10*l.* To carry on a business connected with Tripoli and other esparto growing countries. The subscribers (who take one share each) are—G. Hough, Leadenhall House; R. W. Surtees, 101, Leadenhall-street; G. A. Laws, 101, Leadenhall-street; E. Farvell, 101, Leadenhall-street; E. Hough, 15, Tower Hill; A. Edwards, 5, Newman's Court; C. F. Misent, 38, Fenchurch-street.

THE PHENIX ELECTRIC LIGHT AND POWER COMPANY (Limited).—Capital 250,000*l.*, in shares of 1*l.* The business of electricians in all branches. The subscribers (who take one share each) are—F. Gane, 51, St. John's-road; F. C. Boyle, East Ham; H. Harris, 14, Devonshire-square; W. B. Kew, Dalston; J. Ferguson, Highbury; G. B. Statham, 98, Bishopsgate-street; T. J. Warner, 18, Great Winchester-street.

THE SCANDINAVIAN ELECTRIC COMPANY (Limited).—Capital 10,000*l.*, in shares of 10*l.* To purchase certain patents of C. F. Bush for Sweden, Denmark, Norway, and their colonies. The subscribers (who take one share each) are—J. D. Whitehead, 8, Mount Terrace; A. Mason, 16, Bernard-street; J. Kieby, Rochester-road; R. Gordon, New Malden; H. F. Bass, 13, Hamilton-street; J. R. Eaton, Starch Green-road; R. Coffee, 13, Balfour-road.

THE ELECTRIC WORKS COMPANY (Limited).—Capital 50,000*l.*, in shares of 1*l.* To manufacture all kinds of electric machines or apparatus. The subscribers (who take one share each) are—W. J. Hurst, 6, Clifton-square; W. R. Parker, 11, Glengall-road; H. Moulding, 22, Maltby-street; W. Jackson, 134, Falmouth-road; J. Williams, 13, Bermondsey-square; J. Smith, Tottenham; A. E. Honeybourne, 131, Drummond-street.

THE BIRMINGHAM AND WARWICKSHIRE BRUSH ELECTRIC LIGHT AND POWER SUPPLY COMPANY (Limited).—Capital 100,000*l.*, in shares of 2*l.* To purchase from the Hammond Electric Light and Power Supply Company (Limited) certain licenses, and work same. The subscribers (who take 50 shares each) are—Sir W. Smith, Westbourne-terrace; F. Putwell, 148, Fenchurch-street; D. Evans, 24, Watling-street; G. M. Felton, 6, Well-street; R. G. Molyneux, 2, Lyall-street; T. Hitchens, 16, Rood-lane; A. Hudson, 35, Belsize-road.

THE MILFORD HAVEN HOUSE INVESTMENT COMPANY (Limited).—Capital 20,000*l.*, in shares of 1*l.* A building society's business in all branches. The subscribers are—S. Lake, Milford, 100; W. M. Robbins, Milford, 100; J. M. Toler, Milford, 100; E. G. Sackett, Manchester, 5; G. Flint, Manchester, 50; G. Griffiths, Manchester, 5; A. E. Baldwin, Manchester, 100; T. Brown, Manchester, 100.

THE STAFFORDSHIRE AND WORCESTERSHIRE ELECTRIC LIGHT AND POWER COMPANY (Limited).—Capital 200,000*l.*, in shares of 2*l.* The business of electricians in all branches. The subscribers (who take five shares each) are—E. L. W. Clare, Putney; F. G. Painter, 2, Moorgate-street Buildings; C. Gibbs, 49, Belsize-square; S. Brenell, 105, Highbury New Park; W. Redhill, Hornsey Rise; T. H. T. Rogers, 14, Queen Victoria-street; F. G. Dart, 16, Philpot-lane.

THE DUPLEX ELECTRIC LIGHT, POWER, AND STORAGE COMPANY (Limited).—Capital 100,000*l.*, in shares of 1*l.* The business of electricians in connection with a certain patent. The subscribers (who take one share each) are—W. G. F. Hunt, 8, Duke-street; J. F. Keney, Clapham; W. B. Thornehill, 19, Clifford-street; R. F. Bellis, Waltham-green; E. B. Illidge, 4, Queen Victoria-street; J. O. Byrne, Brixton; J. Mallard, West Kensington.

THE JALLOCHOFF ELECTRIC LIGHT AND POWER COMPANY (Limited).—Capital 300,000*l.*, in shares of 5*l.* The business of electricians, mechanical and chemical engineers, workers and dealers in electricity, &c. The subscribers (who take one share each) are—J. A. Barrett, Peckham; W. Baker, St. Clement's House; W. L. Tolhurst, Camberwell; R. Hodson, 108, Marylebone-road; W. D. Elliston, Leyton Buzzard; H. W. Freeman, 7, Phillimore-terrace; T. P. Lee, 6, Gloster-crescent.

THE HUELVA AND SAN JUAN COPPER COMPANY (Limited).—Capital 200,000*l.*, in shares of 5*l.* To purchase or otherwise acquire and work mines, minerals, mining rights, lands, hereditaments, and chattels, situate in Spain and Portugal, and in particular the land, minerals, and mining rights, known as the Perra del Hierro Mines and El Complemento Mining Concession, in the province of Huelva, Spain, with the mills, ore-houses, &c., erected on said property, and the plant, machinery, stock-in-trade, &c., for the purpose of carrying on the usual business of miners, quarriers, dealers, and exporters of copper and mineral substances. The subscribers are—W. Martineau, 6, Great Winchester-street, C.E., 100; J. Wild, 8, Fowkes Buildings, no occupation, 100; E. B. de B. Barnett, 69, Porchester-terrace, no occupation, 100; G. B. Malleon, 27, West Cromwell-road, colonel, 1; H. A. Cowper, Reform Club, gentleman, 100; J. Murray, Hornsey, clerk, 1; H. Miles, Walthamstow, clerk, 1. The subscribers are to appoint the first directors, the number not exceeding eight or being less than four. Qualification 100 shares.

THE YORKSHIRE BRUSH ELECTRIC LIGHT AND POWER COMPANY (Limited).—Capital 300,000*l.*, in shares of 2*l.* A subsidiary of the American Brush Company (Limited). The subscribers (who take one share each) are—T. W. Ince, St. Benet's Chambers; T. W. Catherwood, 81, Victoria Park-road; W. R. Jackson, Highbury; W. Reeves, Croydon; C. H. Vanderpump, Holloway; F. B. Siley, 45, Alexandra Park-road; G. Crowley, 3, North-street.

THE NATIONAL GAS PURIFYING CORPORATION (Limited).—Capital 50,000*l.*, in shares of 2*l.* To acquire, use, or vend certain patents relating to liquid hydro-carbon. The subscribers are—W. Peirce, Highbury, 25; T. J. Smith, 34, Old Broad-street, 25; C. J. Jutson, 55, Grove-terrace, 25; R. Davies, Tollington Park, 25; T. Nicholson, 16, Portland-street, 25; T. C. Frotman, Barnsbury, 1; B. Glover, 76, Avondale-square, 1; J. E. Mountcastle, 52, Church-road, 1.

THE CHADLE VALLEY COAL AND IRON COMPANY (Limited).—Capital 30,000*l.*, in shares of 1*l.* To acquire, according to the provisions of a certain agreement entered into by the company, the mines, hereditaments, premises and interests, machinery, plant, stock, &c., situated in Staffordshire, and subject to the sanction of the Court of Chancery, Lancaster, the Blackburn and District Benefit Building Society, being the mortgagees, for the purpose of carrying on all operations connected with a colliery and iron company and smelting company. The subscribers (who take one share each) are—E. Jenkins, 10, Pancras-lane, merchant; R. Byramjee, Empire Club, M.D.; T. Ayres, 9, Ormside-street, late sergeant-major; C. Danks, 143, Evering-road, gent.; A. C. Trotman, Caterham, clerk; C. Ritchie, New Cross, accountant; N. Angles, 85, Gracechurch-street, solicitor. The first directors are Messrs. Jenkins, Byramjee, and J. T. Dawes, the first-named gentleman is chairman and managing director.

THE ANGLO-SPANISH BRUSH ELECTRIC LIGHT AND POWER

COMPANY (Limited).—Capital 500,000*l.*, in shares of 5*l.* The subscribers (who take one share each) are—F. Fesser, 32, Cambridge Gardens; C. Wapshare, South Norwood; E. Eleinger, 60, Queen Victoria-street; J. Kincard, 11, Great George's-street; A. J. Davis, 19, Queen Victoria-street; C. S. Fleet, Stratford; J. Costello, 2, Bucklersbury.

THE BRITISH INSULITE COMPANY (Limited).—Capital 250,000*l.*, in shares of 10*l.* To manufacture apparatus in connection with electricity. The subscribers are—M. M. Moore, 83, Lombard-street, 350; G. K. Rikards, Oxford, 100; E. Easton, 7, Delahay-street, 200; J. Dummett, 54, Porchester-terrace, 250; F. Sanders, 11, Delahay-street, 25; J. W. Robinson, 5, Dr. Johnson's Buildings, 25; A. White, 74, Coleman-street, 50.

THE SWAN UNITED ELECTRIC LIGHT COMPANY (Limited).—Capital 1,000,000*l.*, in shares of 5*l.* An electrician's business in all branches in connection with an acquired patent. The subscribers (who take one share each) are—C. Morrison, 53, Coleman-street; W. C. Quilter, 14, King's Arms-yard; H. H. Dobie, 6, Tokenhouse-yard; E. Mires, 20, Great Winchester-street; G. W. Batt, 20, Great Winchester-street; C. Waring, 10, Victoria Chambers; C. Cox, 14, King's Arms-yard.

THE STUART ELECTRIC LIGHT AND POWER COMPANY (Limited).—Capital, 600,000*l.*, in shares of 2*l.* Also a company to acquire and use a certain patent. The subscribers (who take one share each) are—P. Loudon, 19, Sidney-square; E. George, Northcott-road; R. Nettleton, 11, Queen Victoria-street; T. Holinski, 11, Queen Victoria-street; J. Jackson, 280, Commercial-road; T. Torrey, 39, Abingdon-villas; C. F. Millard, 14, Earls-court-road.

THE TELEPHONE AND ELECTRIC LIGHT AGENCY (Limited).—Capital 100,000*l.*, in shares of 1*l.* Manufacturing and dealing in all kinds of apparatus for generating, storing, and transmitting electricity. The subscribers are—G. Ager, 20, Wellington-road, 100; J. F. Hincks, 45, Finsbury Pavement, 10; J. Green, Hammersmith, 10; C. A. Tackley, Holloway, 1; G. C. Winkworth, 10, Coleman-street, 10; C. Clements, 10, Warwick-street, 1; A. Busby, 11, Eaton-square, 1.

THE LEGAL AND MERCANTILE CREDITORS' PROTECTION ASSOCIATION (Limited).—Capital 50,000*l.*, in shares of 5*l.* To purchase and continue an established business at 23, Borough High-street. The subscribers (who take one share each) are—W. H. Edwards, 23, Borough High-street; G. Burton, 118, Tachbrook-street; W. Jones, Stoke Newington; E. Williams, 528, Old Kent-road; F. H. Linnett, 55, Great Dover-street; C. T. Alexander, 84, Great Dover-street; H. H. Tilling, 72, Great Dover-street.

Meetings of Public Companies.

NERBUDDA COAL AND IRON COMPANY.

The twenty-second ordinary general meeting of shareholders was held at the company's offices, Finsbury-circus, on Tuesday, Mr. F. R. BLUETT (the secretary) read the notice convening the meeting.

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The CHAIRMAN said—Gentlemen, I will not detain you very long, but I am happy to say that we meet you under very different circumstances to those which you gather from the report itself. It expresses our great disappointment at the work of last year, but I must say that since we have begun this year we are going on much better. We are in a far better position now than we have been for years—perhaps ever. We have earned a profit, and I do not see anything to prevent that continuing. There is a decided margin in price obtained for the quantity of coal sold, and the expenses incurred in getting it. The output you will see by this monthly report—it is rather a three-monthly report, as it is since Jan. 1—shows an increase of 2088 tons, or a money increase in sales, taking the rupee at the nominal value of 2s. of 1895; that in three months is a satisfactory increase, but I want to see it a permanent one. I am happy to say that that has not only arrived, but will be in full operation before the monsoon begins; and, therefore, I cannot see that there will be any difficulty in keeping the pits going during the whole of the monsoon. Nearly all the shareholders are aware that the dip of our coal is so very great that the water question is very expensive. Not that the quantity of water is very great, but it is expensive to get out because it has to be carried for a long distance in buckets to the place where the pump will pump it up. Therefore for a considerable distance the water has to be carried by hand. When we get the Helen shaft down that will all be got rid of. The borings are going on very satisfactorily; but I do not like having got down 550 ft. in the Georgia shaft without having found coal. We expected to have met with coal long ere this. We are, however, in the coal measures, and so long as we are there we may find coal. We have been working for a year or two in another pit, and we know coal is there, but we do not know at what depth we shall find it. For that reason Mr. Maughan, the manager, has put down a boring to test it. The new boring rods we sent out to the mines are working extremely well, and are doing good work. Col. Mayne, the Chief Engineer of the Central Provinces, has made his report on his annual inspection of the Mohant Coal Mines, dated Feb. 14, 1882. In that report he says:—"Although I believe the manager has done all he could, the progress in the operations for proving the coal, the necessity of which I laid so much stress on in my last report, has not, on the whole, been as great as I had hoped; but it must be remembered that the new boring tools have only been in use a short time, and the unfortunate accident at the bore-hole of the Georgia Pit was beyond control. In spite of delays, however, I am not less sanguine as to the future prosperity of the mines than I was last year; but I would again urge that the directors send out more boring tools, with a view to further explorations of the coal field. The manager fully agrees with me as to the necessity of this. If the boring now being put down had been made a few years ago pit sinking could now be carried on with more confidence, and, therefore, more vigorously." Messrs. John Warner and Sons made those boring rods and they have been very successful, which accounts to a great extent for the increased speed with which the work has been done, the borings going down about twice the speed it was before. The Helen pit is going on very well, and it is now 103 ft. It is all lined where necessary with concrete, and will all be got rid of. The borings are going on sometimes across which do not require walling. However, it is all hard rock or walling down to a depth of 87 ft. As to the accounts, we say:—"The revenue which includes all expenditure under that head exhibits a loss of 957*l.* 13s. 5d., whereby the balance of 748*l.* 5s. 3d. standing to the credit of profit and loss from 1880 has been absorbed, thus leaving a balance of 113*l.* 10s. 2d. to the debit of that account. That is because we have drawn up that account a little differently to what we have done before. If we had drawn up that account in the same manner in previous years, instead of showing a loss, we should have been able to show a small profit. The auditors, however, used in their report last year words similar to those which they use, I think quite unnecessarily, this time, namely—"that a certain sum to be ascertained should be written off against revenue for depreciation." There are various objects for doing it in the way we have done, but we meet it really in principle, because we have charged "mining charges" with over 1100*l.*, being 10 per cent. on the value of the machinery used, and the 1100*l.* goes to the credit of the plant account. Therefore, indirectly, it is depreciation. We thought that a much better way of doing it, and we charge every year for "mining charges" to revenue, it is only fair that that should be paid; and as machinery goes to plant account it is only fair to charge "mining charges" with the cost of replacing it. We have, therefore, done it in the account at the rate of 10 per cent. of the value of the machinery, and instead of showing a profit, or, at least, an apparent profit, on the same system as in previous years, we show a loss of 957*l.* The auditors also call attention to the fact that there are no "detailed lists and valuations of the block and plant, tents, furniture, live stock, timber and stores, certified by the manager, the India." We had this done very carefully last year, and our manager thinks it is not necessary to do it every year, especially so with our small staff. Therefore he proposes to do it every two or three years, because otherwise it would take up time which is more useful in other ways. So we only propose to do what the auditors suggest—every two or three years. You will see in his report the manager speaks about the difficulty of getting men. Every few years that difficulty seems to crop up. Now we want more men than we wanted before, and the manager has tried to get them by contract. He pays the men so much per ton to get the coal. They must not only get coal, but a certain quantity of doing it. By the statement they had up to March 31 it was shown that additional receipts had been something over 1800*l.*, and that a little over 2000 tons of coal more had been raised. That represented about 600*l.* a month additional receipts. Could the Chairman give them any idea what the additional expenses were in getting that 600*l.* a month? Of course, there was the cost of raising the coal. The fixed expenses, of course, remained stationary. The report was so very simple and full that he did not think there was any other question he could ask.

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We have been working for a year or two in another pit, and we know coal is there, but we do not know at what depth we shall find it. For that reason Mr. Maughan, the manager, has put down a boring to test it. The new boring rods we sent out to the mines are working extremely well, and are doing good work. Col. Mayne, the Chief Engineer of the Central Provinces, has made his report on his annual inspection of the Mohant Coal Mines, dated Feb. 14, 1882. In that report he says:—"Although I believe the manager has done all he could, the progress in the operations for proving the coal, the necessity of which I laid so much stress on in my last report, has not, on the whole, been as great as I had hoped; but it must be remembered that the new boring tools have only been in use a short time, and the unfortunate accident at the bore-hole of the Georgia Pit was beyond control. In spite of delays, however, I am not less sanguine as to the future prosperity of the mines than I was last year; but I would again urge that the directors send out more boring tools, with a view to further explorations of the coal field. The manager fully agrees with me as to the necessity of this. If the boring now being put down had been made a few years ago pit sinking could now be carried on with more confidence, and, therefore, more vigorously." Messrs. John Warner and Sons made those boring rods and they have been very successful, which accounts to a great extent for the increased speed with which the work has been done, the borings going down about twice the speed it was before. The Helen pit is going on very well, and it is now 103 ft. It is all lined where necessary with concrete, and will all be got rid of. The borings are going on sometimes across which do not require walling. However, it is all hard rock or walling down to a depth of 87 ft. As to the accounts, we say:—"The revenue which includes all expenditure under that head exhibits a loss of 957*l.* 13s. 5d., whereby the balance of 748*l.* 5s. 3d. standing to the credit of profit and loss from 1880 has been absorbed, thus leaving a balance of 113*l.* 10s. 2d. to the debit of that account. That is because we have drawn up that account a little differently to what we have done before. If we had drawn up that account in the same manner in previous years, instead of showing a loss, we should have been able to show a small profit. The auditors, however, used in their report last year words similar to those which they use, I think quite unnecessarily, this time, namely—"that a certain sum to be ascertained should be written off against revenue for depreciation." There are various objects for doing it in the way we have done, but we meet it really in principle, because we have charged "mining charges" with over 1100*l.*, being 10 per cent. on the value of the machinery used, and the 1100*l.* goes to the credit of the plant account. Therefore, indirectly, it is depreciation. We thought that a much better way of doing it, and we charge every year for "mining charges" to revenue, it is only fair that that should be paid; and as machinery goes to plant account it is only fair to charge "mining charges" with the cost of replacing it. We have, therefore, done it in the account at the rate of 10 per cent. of the value of the machinery, and instead of showing a profit, or, at least, an apparent profit, on the same system as in previous years, we show a loss of 957*l.* The auditors also call attention to the fact that there are no "detailed lists and valuations of the block and plant, tents, furniture, live stock, timber and stores, certified by the manager, the India." We had this done very carefully last year, and our manager thinks it is not necessary to do it every year, especially so with our small staff. Therefore he proposes to do it every two or three years, because otherwise it would take up time which is more useful in other ways. So we only propose to do what the auditors suggest—every two or three years. You will see in his report the manager speaks about the difficulty of getting men. Every few years that difficulty seems to crop up. Now we want more men than we wanted before, and the manager has tried to get them by contract. He pays the men so much per ton to get the coal. They must not only get coal, but a certain quantity of doing it. By the statement they had up to March 31 it was shown that additional receipts had been something over 1800*l.*, and that a little over 2000 tons of coal more had been raised. That represented about 600*l.* a month additional receipts. Could the Chairman give them any idea what the additional expenses were in getting that 600*l.* a month? Of course, there was the cost of raising the coal. The fixed expenses, of course, remained stationary. The report was so very simple and full that he did not think there was any other question he could ask.

The CHAIRMAN said—Gentlemen, I will not detain you very long, but I am happy to say that we meet you under very different circumstances to those which you gather from the report itself. It expresses our great disappointment at the work of last year, but I must say that since we have begun this year we are going on much better. We are in a far better position now than we have been for years—perhaps ever. We have earned a profit, and I do not see anything to prevent that continuing. There is a decided margin in price obtained for the quantity of coal sold, and the expenses incurred in getting it. The output you will see by this monthly report—it is rather a three-monthly report, as it is since Jan. 1—shows an increase of 2088 tons, or a money increase in sales, taking the rupee at the nominal value of 2s. of 1895; that in three months is a satisfactory increase, but I want to see it a permanent one. I am happy to say that that has not only arrived, but will be in full operation before the monsoon begins; and, therefore, I cannot see that there will be any difficulty in keeping the pits going during the whole of the monsoon. Nearly all the shareholders are aware that the dip of our coal is so very great that the water question is very expensive. Not that the quantity of water is very great, but it is expensive to get out because it has to be carried for a long distance in buckets to the place where the pump will pump it up. Therefore for a considerable distance the water has to be carried by hand. When we get the Helen shaft down that will all be got rid of. The borings are going on very satisfactorily; but I do not like having got down 550 ft. in the Georgia shaft without having found coal. We expected to have met with coal long ere this. We are, however, in the coal measures, and so long as we are there we may find coal. We have been working for a year or two in another pit, and we know coal is there, but we do not know at what depth we shall find it. For that reason Mr. Maughan, the manager, has put down a boring to test it. The new boring rods we sent out to the mines are working extremely well, and are doing good work. Col. Mayne, the Chief Engineer of the Central Provinces, has made his report on his annual inspection of the Mohant Coal Mines, dated Feb. 14, 1882. In that report he says:—"Although I believe the manager has done all he could, the progress in the operations for proving the coal, the necessity of which I laid so much stress on in my last report, has not, on the whole, been as great as I had hoped; but it must be remembered that the new boring tools have only been

Richmond, 417 tons of purchased ore, and 3067 tons of flux by No. 4 furnace, together with the drosses from the refinery. The total production for the year from all the furnaces is 26,782 ozs. of gold, 848,562 ozs. of silver, and 7392 tons of lead. The item of fluxing ore appears for the first time in the accounts; it consists principally of the furnace dross from the Hoosac Mine, which the Richmond Company have purchased.

The amount received during the year on sales of gold, silver, and lead is £1,197, 5s. 9d., and the estimated net value of the bullion in transit and at the works, unrealised on Feb. 28, 1882 (after allowing for all unpaid refining and marketing expenses) is £205,080, 2s. 8d.—together £1,402, 7s. 5d.—from which has to be deducted the value of the bullion in hand Feb. 28, 1881, then estimated at £199,290, 5s. 8d., and £3,237, 14s. 8d. paid for purchased bullion, refining, freights, commission, brokerage, and other marketing expenses, leaving £1,003, 11s. 1d., as the net value of the bullion produced in the year. The cost of mining and hauling ore to the furnaces, deadwork, smelting, purchased ore, renewals, and repairs, and all other working and general expenses at Eureka being £239,871, 14s. 8d. The profit for the year on mining, smelting, and refining is, with £134, 19s. 10d. received for sundries, £108,604, 13s. 3d. Comparing these with the corresponding figures of last year, it will be found that there has been a decrease of 17,583 tons in the quantity of ore smelted, of 20,764 ozs. of gold produced, 433,373 ozs. of silver, and 5204 tons of lead. The decrease in the quantity of ore smelted is consequent upon the furnaces having been shut down for seven weeks for repairs—and one large furnace only having been run since Feb. 6; and the decrease in the quantity of gold, silver, and lead produced, arises partly from the same cause, and partly in consequence of the average assay of the ore being \$53.46 per ton only, as against \$65.11 last year. The yield per ton of ore (Richmond and purchased together) has been this year \$49.41, as against \$60.23 last year. The bullion has realised 77 per cent. of the Eureka standard assay value, as compared with 75½ per cent. last year.

The working expenses of mining have increased from \$9.58 to \$10.48 per ton, and the smelting expenses from \$11.21 to \$13.51. Compared, however, with former years, these expenses show a decrease. The increase in the smelting is caused principally by the higher price of charcoal. The refinery has been working satisfactorily, and has treated the whole of the bullion produced, and 314 tons of bullion purchased; the expenses have increased slightly from \$14.09 to \$14.27 per ton. The cost of rebuilding the furnaces, of repairing the whole of the machinery, of providing a new steam-engine, a new Baker blower, a new pump breaker, and other new machinery, have been paid out of revenue; as also the sum of £1000, paid for the purchase of spring and water rights. Large sales of lead have recently been made, the stock at Eureka unsold being now reduced to 9615 tons. Great difficulties have hitherto existed in getting the lead to market; a contract, however, has now been arranged with the railway company for its transport, and it will be forwarded more rapidly; 3000 tons have lately been sold at \$4.85 cents. per lb. in New York (19½. 8s. per ton of 2000 lbs.); the price is now about 20¢. per ton.

The exploratory work done in the mine during the year is large, and consists of 5628 ft. of drifts, 357 feet of winzes, and 924 feet of raises, making a total of 6910 ft., the main Richmond shaft has also been sunk 330 ft. below the 900. The cost of this work has been £17,689, 19s. 2d. In November rich ore was struck below the 600, which promised at first to open out to a fine body of ore. Mr. Probert and Mr. Rickard both thought this was the continuation downwards of the 14th chamber, but although a cave was found with rich ore in the bottom, and promising indications for its continuing downwards—up to the present time no large bodies have been discovered. Explorations are now being made in all the levels, and favourable indications for ore have been met with in several places; in the 200 some good ore was discovered in February—which was found to connect with what is called the old flat chamber. It must be borne in mind that the ore in the Richmond Mine occurs in large irregular deposits or chambers, about 20 of which have now been discovered; there is little or nothing to guide the miners as to the position of these chambers, but they may be met with at any moment in any of the levels—there is a large extent of ground yet unexplored both above and below the 600—and this work is being proceeded with energetically by the aid of four Burelligh rock drills and air-compressor.

As announced to the shareholders on Feb. 6, the amount of damages, interest, and costs in respect of the several suits between the Richmond Company and the Eureka Company was agreed to out of Court; the Richmond Company paying \$100,000 in full settlement, and conveying to the Eureka Company a small piece of ground lying on the south-east side of the compromise line extended. It is remembered that the Eureka Company laid their damages at \$2,500,000, or 500,000 sterling, the Eureka Company think this settlement will be looked upon by the shareholders as satisfactory.

With respect to the Albion suit, of which the shareholders have been fully informed from time to time, the case came on for hearing before the District Court at Eureka, in July, 1881, when a decision was given in favour of the Richmond Company; the Albion Company appealed to the Supreme Court of the State of Nevada, at Carson; the appeal was heard in November, 1881—but no decision was given until March, 1882, when the Carson Court reversed the decision of the District Court. The Richmond Company have now appealed to the Supreme Court of the United States at Washington (the Court of Appeals). In the meantime it will be the duty of the Richmond Company to endeavour to prevent the Albion Company from taking the ore out of the disputed ground—until the question is finally decided.

PROVINCIAL STOCK AND SHARE MARKETS.

CORNISH MINE SHARE MARKET.—Mr. S. J. DAVEY, mine shareholder, Redruth (May 25), writes:—We have had a better demand for Carn Brea, New Cook's Kitchen, Pedn-an-drea, South Frances, Tincroft, and Wheal Bassett, in our market this week. Other mines have been quiet. Wheal Bassett advanced ¼, Tincroft 3, Carn Brea ¼, and South Frances ¼. To-day Wheal Bassett, Killifreth, and East Pool are required for. Subjoined are the closing quotations:—Blue Hills, ¼ to 1; Carn Brea, ¼ to 1; Cook's Kitchen, ¾ to 1; Dolcoath, 69½ to 70½; East Pool, 10½ to 11½; East Basset, 1½ to 1½; East Basset, 5½ to 5½; Killifreth, 5½ to 5½; Mellanear, 4 to 4½; New Cook's Kitchen, 7 to 7½; New Killy, 1½ to 2; North Busy, 1½ to 1½; Phoenix, 2½ to 2½; Pedn-an-drea, 3½ to 4; South Condurrow, 3 to 3½; South Crofty, 10 to 10½; South Tolarne, 2½ to 2½; South Frances, 1½ to 1½; Tincroft, 14½ to 14½; West Basset, 11 to 11½; West Frances, 9½ to 10; West Killy, 8 to 8½; West Peavor, 11½ to 12½; West Pollice, 5½ to 5½; West Polbrean, 1 to 1½; West Tolarne, 12½ to 17½; West Tincroft, 37 to 39; Wheal Agar, 14 to 15½; Wheal Bassett, 8½ to 8½; Wheal Comford, 10 to 10½; Wheal Grenville, 10 to 12½; Wheal Jane, ¾ to ¾; Wheal Peavor, 10 to 10½; Wheal Prussia, ¼ to ¾; Wheal Ury, 2½ to 2½.

—Mr. J. H. REYNOLDS, stock and share broker, Redruth (May 25), writes:—During the week moderate business has been doing in Dolcoath and East Pools at rather lower prices than in the week before last, in demand at an advance on the cutting of the flat lode at the 137 ft. level, still cutting through the lode, which is now fully 5 fms. wide. Buyers to-day 8½. Subjoined are the closing quotations:—Blue Hills, 1 to 1½; Carn Brea, 14 to 14½; Camborne Vau, 5s. to 7s. 6d.; Cook's Kitchen, 37 to 38; Dolcoath, 70 to 70½; East Pool, 53 to 53½; East Basset, 10s. to 12s. 6d.; Killifreth, 5½ to 5½; Marke Valley, 5½ to 5½; Mellanear, 4 to 4½; New Cook's Kitchen, 6½ to 7½; New Killy, 2 to 2½; North Busy, 3½ to 3½; North Herodfoot, 7s. 6d. to 7s. 6d.; North Penatral, 5½ to 5½; Pedn-an-drea, 3½ to 3½; Phoenix, 2½ to 2½; South Crofty, 10 to 10½; South Frances, 1½ to 1½; South Tolarne, 2½ to 2½; Tincroft, 14½ to 14½; West Basset, 11 to 11½; West Frances, 10 to 10½; West Killy, 8 to 8½; West Peavor, 12 to 12½; West Polbrean, 1 to 1½; West Pollice, 5 to 5½; West Tincroft, 37 to 38; West Tolarne, 13 to 14; Wheal Agar, 15 to 15½; Wheal Bassett, 8 to 8½; Wheal Boys, 1½ to 2; Wheal Grenville, 10 to 10½; Wheal Hony and Trelawny, 2½ to 2½; Wheal Jewell, ¼ to ¾; Wheal Killy, 1 to 1½; Wheal Peavor, 10 to 10½; Wheal Prussia, ¼ to ¾; Wheal Ury, 2½ to 2½; Wheal Jane, 1 to 1½.

—Messrs. ABBOTT and WICKETT, stock and share brokers, Redruth (May 25), write:—During the past week there has been a good enquiry for Carn Brea, Tincroft, North Busy, Killifreth, Pedn-an-drea, and Wheal Bassett, and quotations show a marked improvement. Very little doing in Dolcoath or East Pools. Closing quotations:—Blue Hills, 1 to 1½; Carn Brea, 14 to 14½; Camborne Vau, 5s. to 7s. 6d.; Cook's Kitchen, 37 to 38; Dolcoath, 70 to 70½; East Pool, 53 to 53½; East Basset, 10s. to 12s. 6d.; Killifreth, 5½ to 5½; Marke Valley, 5½ to 5½; Mellanear, 4 to 4½; New Cook's Kitchen, 6½ to 7½; New Killy, 2 to 2½; North Busy, 3½ to 3½; North Herodfoot, 7s. 6d. to 7s. 6d.; North Penatral, 5½ to 5½; Pedn-an-drea, 3½ to 3½; Phoenix, 2½ to 2½; South Crofty, 10 to 10½; South Frances, 1½ to 1½; South Tolarne, 2½ to 2½; Tincroft, 14½ to 14½; West Basset, 11 to 11½; West Frances, 10 to 10½; West Killy, 8 to 8½; West Peavor, 12 to 12½; West Polbrean, 1 to 1½; West Pollice, 5 to 5½; West Tincroft, 37 to 38; West Tolarne, 13 to 14; Wheal Agar, 15 to 15½; Wheal Bassett, 8 to 8½; Wheal Boys, 1½ to 2; Wheal Grenville, 10 to 10½; Wheal Hony and Trelawny, 2½ to 2½; Wheal Jewell, ¼ to ¾; Wheal Killy, 1 to 1½; Wheal Peavor, 10 to 10½; Wheal Prussia, ¼ to ¾; Wheal Ury, 2½ to 2½; Wheal Jane, 1 to 1½.

—Mr. M. W. BAWDEN, Liskeard (May 25), writes:—The mining market has shown an improvement during the week, and a moderate amount of business has been transacted with buyers of Carn Brea, Phoenix United, South Frances, Tincroft, and Wheal Bassett shares at an advance, whilst the favourite mines, Dolcoath and East Pool, have receded. Subjoined are the closing quotations:—Blue Hills, 1½ to 1½; Carn Brea, 15 to 15½; Cook's Kitchen, 38 to 38½; Dolcoath, 70½ to 71; Devon Consols, 7 to 7½; Devon Great United, ¾ to ¾; East Basset, 10½ to 10½; East Herodfoot, ¾ to ¾; East Pool, 53 to 53½; Gawn United, ¾ to ¾; Glasgow Caradon, ¾ to ¾; Gunnislake (Clitters), 2½ to 2½; Herodfoot, ¾ to ¾; Hingston Down, ¾ to ¾; Killifreth, 5½ to 5½; Marke Valley, 5½ to 5½; New West Caradon, ¾ to ¾; North Herodfoot, 7½ to 7½; Old Gunnislake, ¾ to ¾; Phoenix United, 3 to 3½; Prince of Wales, 1½ to 1½; South Caradon, 10 to 12; South Condurrow, 8½ to 8½; South Crofty, 11 to 11½; South Devon United, ¾ to ¾; South Frances, 1½ to 1½; Tincroft, 14½ to 15; West Basset, 11½ to 12; West Caradon, 10 to 10½; West Frances, 10 to 10½; West Killy, 8 to 8½; West Mary Ann, 1½ to 1½; West Peavor, 11½ to 12; West Phoenix, 7½ to 1; West Tincroft, 38 to 40; Wheal Agar, 15 to 15½; Wheal Bassett, 7½ to 7½; Wheal Creston, 3½ to 3½; Wheal Grenville, 10½ to 11; Wheal Hony and Trelawny, 2 to 2½; Wheal Killy, 1 to 1½; Wheal Jane, ¾ to ¾; Wheal Peavor, 10½ to 11; Wheal Ury, 3 to 3½.

MANCHESTER.—Messrs. JOSEPH R. and W. P. BAINES, share-brokers, Queen's Chambers, Market-street (May 25), write:—In only the leading securities has any approach to activity prevailed during the past week, and in these, though some quiet buying was going on, no stir was manifest till the account had been arranged yesterday. The continuance of fine weather has helped the feeling of hope of satisfactory traffic during Whit week; and though during the past day or two the weather has fallen, the benefit to agricultural prospects, coupled with the hope that the weather is more likely to be settled again for next week contracts what would otherwise be a depressing influence. The cheapness of money also contributes to buoyancy, and would doubtless have more effect in the absence of disturbing elements in home and foreign politics. In miscellaneous investments little is moving in the aggregate, indisposition to operate in face of the banks having changed hands in only a very few cases, but the transactions both in number and price bear very favourable comparison with the several other descriptions of investments reported upon. Whilst dealings are few, however,

figures are well maintained, there being no adverse change in quotations, whilst Union Bank of Manchester (after late fall) are ¼, Manchester and County ¼, Manchester and Liverpool District ¼, and Consolidated ¼ higher.

INSURANCE shares are practically without attention as regards business to be reported, but values have in several cases undergone revision, the result being contradictory. Higher: Liverpool and London and Globe ¾, (now ex div. 65), Manchester Underwriters ¼, British Re-Insurance ¾, and Positive Life 3. Lower: Queen, ¼ (but have been still lower), British and Foreign Marine ¾, Equitable Fire 1½, and Lancashire and Yorkshire Accident 1½.

COAL, IRON, &c., AND MINING record few dealings than has been the case for some long time past, only Bolckow (fully-paid), Canadian Copper, and Ebbw Vale producing any business, the first-named being credited with one solitary transaction. Ebbw Vale have been done a few times, the latest price realised being fraction above worst of week. Canadian Coppers are neglected, but values are stationary. There is no feature of interest in this class except, perhaps, the fact that in the changes of quotations the balance is preserved rather more evenly as between higher and lower than is usually to be recorded herein. Higher: Gas Light and Coke (A Ordinary), Indian Phoenix Gold, Parkgate Iron ¼ (now ex div.), Rio Tinto ¼, and Thariss Sulphur, &c., ¼. Lower: Nant-y-Glo and Blaith (pref.), 1, Cammells ¼, Tredegar (A) ¼, West Cumberland Iron, &c., ¼, Telegraph Construction and Maintenance ¼, John Brown ¼, Consolidated Telephone Construction and Maintenance ¼, and Ebbw, after being rather lower, ¾.

TELEGRAPHS.—An all-round downward movement is to be recorded, Anglo and Directs being foremost. TELEPHONES, too are lower generally, but most especially Uniteds, which mark 2 down.

COTTON SPINNING AND MANUFACTURING.—The market still manifests strength as regards the shares of the foremost concerns, and some better values are recorded, but the demand is not general, and outside the few favourites business is very hard to conclude.—CORPORATION STOCKS, &c., are steady, and Leeds Debentures show a further gain of ¼.—MISCELLANEOUS are not brisk generally, but a few concerns attract attention. Hudson's Bay are ¾ better, and amongst local concerns Southport Winter Gardens and Bradbury's are enquired for at better prices, but Manchester Carriage and Trams, A and Issues, are again lower, the latter severely so. Vin Santes, too, are easier.

RAILWAYS.—A disposition has been manifest to buy heavy lines for the new account, in anticipation, doubtless, of Whit week traffic, and one or two noteworthy advances are to be recorded, foremost amongst which are Great Western, Lancashire and Yorkshires, and North-Eastern. North British, too, have come into request, and quote distinctly better, but Caledonians are easier. Canadians have not moved much, but Great Westerns are rather easier on the week. Americans have shown, with some slight exceptions, little or no animation, and on threatened strikes in the coal regions many declines are to be noted in the van, amongst which are Readings and Pennsylvanias.

SCOTCH MINING AND INDUSTRIAL COMPANIES SHARE MARKETS.

STIRLING.—Mr. J. GRANT MACLEAN, sharebroker and ironbroker (May 25), writes:—During the past week the markets have been quiet, but the tendency of prices is not unfavourable. The fine weather, good harvest prospects, and the easy state of the money market are all in favour of busier trade. The fortnightly settlement is now in progress and restricts transactions; the new settlement is fixed for June 14.

In shares of coal, iron, and steel companies the principal business has been in Marbels, which are steady at 6 to 6½. In the Scotch pig-iron market prices have been steady from 47s. 3d. to 48s.; the feeling is a little more cheerful, as the shipment are good and home trade active, but the large stocks and the dulness of the American demand are against prices improving. Alltairi are at 25s.; ditto (pref.) 7 per cent. debentures, par; Chatterley Iron, 6½ to 7; and Myndy Iron, 20s. to 25s.

In shares of foreign copper and lead concerns there has been a good business doing. York Peninsula are firmer, as the dividend declared some time ago of 3s. for the preference shares is to be paid on May 31. Thariss have improved from 41½ to 41½; Huntington from 32s. to 42s.; Copiapo are at 79s.; Hornachos (3½. paid), 35s.; Mason and Barry, 19; Norway Copper (pref.), 2s. 6d. 4s.; South Australia Copper, par; and Taunus Silver-lead, par.

In shares of home mines prices are steady, with rather more disposition to buy, owing to the firmer state of the markets for copper and tin. Bell Vans are at 22s. 6d.; Caron, 2s. 6d.; Carnarvon, 7s. 6d. to 10s.; Carpellas, 2s. 6d.; Drakewalls, 11s. 3d. to 13s. 9d.; Derwent, 15s.; East Botalack, 22s. 6d.; East Pool, 53 to 54; East Basset, 7s. 6d.; East Craven, 5s. to 10s.; East Roman, 12s. 6d. to 15s.; East Rose, 10s. to 12s. 6d.; From Hall, 7s. 6d.; Great Wheel Chiverton, 2s. 6d.; Great Wheel Caradon, 3s. 9d.; Great Polgoth United, 7s. 6d. to 12s. 6d.; Great Holway, 4 to 5; Indian Phoenix, 3s. 9d.; Killifreth, 6½ to 5½; Kilt Hills, 10s. to 15s.; Mellanear, 8s. to 9s.; Mounts Bay, 5s. to 7s. 6d.; Mona Consols, 21s. to 25s.; Mount Carbis, 45s.; New Great Wheel Vor, 5s. to 10s.; New Penrose, 2s. 6d.; Old Shepherds, 7s. to 9s.; Parkas, 3s. 9d.; Pelywood, 3s. 9d.; Pennant, 4 to 5; Pant-y-Mwyn, 10s. to 12s. 6d.; Pen-y-Ore, 8s. 6d.; Pandora, 2s. 6d. to 5s.; Queen of the Mountain, 38s.; Royalton, 3s. 6d.; St. Brides, 4s. to 6s.; South Crofty, 10s. to 12s.; South Frances, 1½ to 1½; South Devon, 12s. 6d. to 17s. 6d.; Tamar, 7s. 6d. to 10s.; Treavean, 7s. 6d. to 10s.; Tin Hills, 7s. 6d. to 12s. 6d.; Walkham United, 5s. to 15s.; West Crebor, 12s. 4d. to 15s.; West Devon, 5s. to 10s.; West Killy, 8 to 8½; West Chiverton, 15s. 3d. 4s.; Wheal Bassett, 7½ to 8; Wheal Fortune, 25s.; Wheal Grenville, 10½; and Wheal Jane, 15s. to 25s.

In shares of gold and silver mines prices are generally better. Richmonds have improved from 7½, 7½, to 8, 8½; Indian mines also improved, especially Phoenix. Akankos are at 5s. to 7s. 6d.; Central Wynad, 7s. 6d. to 10s.; Caria Park, 10s.; Colombian Hydraulic, 4s. to 6s.; Eureka, Nevada, 4s. to 5s.; Gold of Canada, 10s. to 12s. 6d.; Gold Coast, par to 5s. prem.; Indian Consolidated, 12s. 6d.; Indian Trevelyan, 8s. 9d. to 11s. 3d.; Indian Kingstons, 3s. 9d. to 6s. 3d.; I.X.L., 2s. to 4s.; Isabelle, 7s. 6d. to 10s.; New Callao, 2s. 6d. to 7s. 6d.; Nava de Jadregue, 2s. 6d.; New Gold Run, 3s. 6d.; ditto (pref.), 4s.; Olathe Silver, 5s. to 10s.; Port Phillip, 4s. to 6s.; Rhodes Reef, 11s. 3d. to 13s. 9d.; Rio Grande do Sul (B), 20s. to 30s.; Silver Peak, 3s. 9d. to 5s.; Simon Reef, 2s. 6d. to 3s. 9d.; and Wala Wynad, 5s. to 10s.

In shares of oil and miscellaneous companies there has been little business doing. Drottwich Salt are at 25s.; Lawes' Chemical, 5½ to 8; ditto (pref.), 10 to 10½.

EDINBURGH.—Messrs. THOMAS MILLER and SONS, stock and share brokers, Princes-street (May 24), write:—The railway market during the past week has been dull. North British Railway stock has risen from 94 to 95, Great Western from 142 to 144, North-Eastern from 169½ to 170½, Metropolitan District from 61½ to 62½. Caledonian has receded from 109 to 108½, Brighton Deferred from 144½ to 142½. Prices of Preference, Guaranteed, and Debenture stocks have been maintained, and Edinburgh and Glasgow Preference has advanced from 111½ to 113. In Canadian Grand Trunk stocks are rather lower, and Great Western are unchanged. Readings have declined from 29½ to 29, but other Americans are little altered. In Banks British Linnan has risen from 281 to 283, Bank of Scotland from 290 to 290½, Commercial from 55½ to 56, Royal from 210 to 212. Clydesdale have declined from 24½ to 24, Union from 24½ to 24½, Caledonian from 85s. to 84s. In Insurance shares North British and Mercantile have declined from 85 to 83, Standard Life from 52½ to 57½. Life Assurance have improved from 2½ to 2½. Northern from 50½ to 52½, Scottish Union, A, from 74s. to 75s. 6d. There has been no movement of any consequence in mining shares. Oil shares have been strong. Burntisland have risen from 10 to 10½, Young's Paraffin from 9½ to 10½, Oakbank have receded from 33s. to 35s. Edinburgh Tramways have advanced from 13½ to 14½. Prairie Cattle shares from 13½ to 14½.

IRISH MINING AND MISCELLANEOUS COMPANIES SHARE MARKET.

CORK.—Messrs. J. H. CARROLL and SONS, stock and share brokers, South Mall (May 24), write:—Great Southern were easier to-day at 111½ to 112½, Midlands were bought at 82½, and Limericks at 32. National Bank shares were done at 23½ to 23 15-16ths, Hibernians at 30½ to 30½, and Munsters at 7½. Cork Packets remain 10 to 10½. No change in Cork Gas shares. Gouldings are 8½. Cork Harbour Board Debentures were dealt in at 102½.

TREATING AND UTILISING FIBROUS PEAT.

A novel method of treating and utilising fibrous peat and fibrous vegetable matter of analogous character, so that it can be used as a substitute for straw as litter for horses and other animals in stables, farmyards, and places of the like kind; and subsequently, when mixed or saturated with animal matter as a manure has been invented by Mr. J. A. LOUDAN, of Southampton-buildings. He uses peat of as fibrous a nature as is conveniently possible, such as is abundant in Dartmoor and other beds of mossy peat, and he cuts or slices off the upper layer of earthy or impure vegetable matter to a sufficient depth, and he then removes the fibrous and porous peat which is found beneath such upper layer. He removes such fibrous peat in blocks or sections of convenient size, and presses it by means of hydraulic or other suitable pressing machinery until the principal part of the moisture which it contains has been expelled. He then takes the fibrous peat thus partially dried, and disintegrates and tears or beats it, preferably by means of machinery or apparatus of any of the kinds ordinarily used for such purpose, in order that the fibres of which it is composed may be separated and made distinct, without which the material would not be applicable as litter with comfort to the horses or cattle using it.

The clean fibrous material thus prepared is then dried, either in the open air or in stoves, ovens, or kilns of any ordinary kind, and when dry he presses it into bales or trusses by hydraulic or other power, in which form it can be readily and cheaply transported, and he uses it, either alone or mixed with straw, as a litter in stables and farmyards instead of straw, sawdust, or other materials now ordinarily used. The material prepared in the manner and for the purpose described is very absorbent, and takes up readily the liquid and other animal substances used as manures, so that when removed from the stable or farmyard, after having been so used and satu-

rated, it forms an admirable manure. It is very wholesome and clean, and considerable economy is effected by its use as described instead of straw, which has not the absorbent capability of the peat fibre treated and used as described, but only after a long process of decomposition and saturation becomes sufficiently combined with animal matter to constitute a valuable manure. Peat of the kind described contains naturally tannic acid, which precipitates the ammonia in the animal matters from which the manure is formed, and so increases the value of the latter.

THE HEATING POWER OF THE FUTURE—COAL, GAS, AND ELECTRICITY.

It would appear that the time is fast approaching when the consumption of coal for manufacturing, light, and all heating purposes will play but a subordinate part compared to what it has done, and that the predictions of some of those who wrote on the exhaustion of our coal fields will be further off than ever from being verified. Those on the other hand who believed that for some years there would be an annual increase in the requirements of coal for manufacturing and all other purposes, and that the consumption would become stationary and then fall off, are in a fair way of seeing their views realised much sooner than they expected. During the last week or two electricity has made great strides, judging by the many new companies that have been formed, and the high price at which the shares have gone up to. Admitting that the electric light will supersede gas for the lighting of our towns, yet gas for other purposes is coming into greater request every day for manufacturing purposes, and is found to be far more economical than the coal from which it is made. It is being used in the making of steel by the Siemens process, in the production of iron for the hammer and the rolling-mill, and just now it is about to be utilised in the manufacture of bricks. It is also more than ever being required for engines, from one-horse power up to 60 or 70-horse power. Some of the uses to which gas is now, or about to be, employed are worthy of more than a mere passing notice. Foremost amongst these is the invention just patented by Mr. CRAVEN, of Wakefield, and our friend, Mr. H. CHAMBERLAIN, who is well known in connection with his system of moulding bricks which has been adopted in almost every part of the kingdom, and also for the drying of the bricks in close sheds, under the floors of which flues traverse through which the waste heat is taken from the kilns. By a machine brought out by Messrs. BRADLEY and CRAVEN 18,000 bricks can be made in a day of 10 hours, all being equal in quality. Hitherto the bricks at the most economical works have required 3 cwt. 3 qrs. of small coal for every 1000 bricks made, even by the Hoffman system, which is considered the best. Messrs. CRAVEN and CHAMBERLAIN, however, consider that they have perfected a system of drying and burning by gas that will not only greatly reduce the cost of fuel, but by which a much greater heat will be obtained at considerably less expense, and one that can be easily regulated, whilst the drying and burning process will occupy a much shorter time with greater uniformity, the bricks being turned out of a better and cleaner quality and colour than is possible by the ordinary method.

Gas is now being successfully applied to the puddling of iron, and the use of gaseous fuel has been pronounced a success in every way, there being no boiling, the charge merely swelling out. The system is capable of considerable modification, for by it the metal can be taken direct from the blast furnace, or after a second melting in a reverberatory furnace, or it may be melted in the puddling furnace itself. But as regards fuel the saving is something most important. A ton of iron can be puddled by the system we are drawing attention to with only 2500 cubic feet of gas made from coal of an ordinary description, or scarcely one-fourth of what was contained in a ton of the solid fuel, whilst in addition there was the coke and hydrocarbon left to lessen still further the cost of production. Where the pig was first melted in a cupola the consumption of coal in the shape of gas would only be at the rate of 5 cwt. per ton, whilst by the ordinary process it would be something like three times the quantity. As to the gas manufacturing plant it has been calculated that one bench of five retorts in a group would be equal to the production of 100 tons of puddled bars weekly. The furnace for puddling consists of a pan-shaped vessel mounted on an axis inserted into a long bearing bored out in a framing situated immediately below the pan with a bevel wheel driven by a pinion keyed on the axis between the bottom of the pan and the frame, the latter being mounted on trunnions allowing of a tilting motion at right angles to its bearings. The arrangement of the shaft is such that the pan can be revolved at any angle, the centre of motion being situated a little above the centre of the pan, and the weight of the trunnion frame is adjusted so as to balance the weight of the pan and its contents. The source of heat consists of an enlarged gas blow-pipe, the jet from which enters the mouth of the pan nearly central, whilst the products of combustion escape concentrically outside the tuyere and inside the edge of the pan. The gas enters from the main into an annular space just above the tuyere, and the air is forced through a nozzle placed centrally and perforated with holes. The nose of the outer tuyere is protected from the heat by means of a coil, after the manner of a blast furnace, but instead of water it is sufficient to allow a small jet of steam to circulate through it. Another means of generating the gas is by a combustion chamber with a solid hearth and no fire bars. By this system the coal was fed from the top, the combustion taking place at the bottom, and the gas escaping immediately between the two through lateral openings into a channel which passed round the chamber, and from which channel it was conducted into a main communicating with the furnace or a number of furnaces. The air required for combustion was obtained by means of a steam jet blowing into a bell-mouthed pipe placed outside, but mounted on a box-shaped casting which traversed the middle of the chamber. In the interior, on each side of the box, there were openings through which the mingled air and steam found their way into the charge, the openings preventing any currents from passing up the sides of the chamber in an undecomposed state and contaminating the gas as they probably would do unless proper precautions were taken. As to the blast it can be obtained in several ways, including a Root's blower, whilst the waste heat is utilised by allowing it to pass on its way to the atmosphere by a vertical chamber traversed by a series of heating pipes through which the air is forced on its way to the tuyere. The furnace worked by gas, it may also be stated, is more durable than those where ordinary fuel is used, and 100 heats have been got out of the former without the lining requiring any repairs whatever. Another advantage is that the phosphorus appears to be nearly altogether eliminated from the puddled iron. Here we have a process which, with some modifications, is likely to be pretty generally adopted, and that must result in an immense saving of fuel.

Dr. SIEMENS has also done a great deal in economising fuel in the production of steel by using gas only in his reverberatory furnaces, in which the metal is kept under the same control as in the crucibles. The Siemens gas producing furnaces produce as much as 5 tons of steel at each charge. He has also shown that for domestic purposes a great saving can be effected in our households by a simple process, giving an increased amount of heat. This can be done by means of a stove constructed like an ordinary fireplace, having a bottom plate of copper riveted to a plate of the same material forming the back of the grate. A gas pipe pierced with holes is fitted behind the lowest bar of the grate, and the upper part is filled with lumps of coal. By an ingenious arrangement a current of hot air is forced upon the gas flames, thereby greatly increasing their heating properties. Here, again, gas plays a by no means unimportant part, and evidently will continue to do so. As we have before stated, to some extent the electric light may extinguish a great many gas lamps in our towns, and may interfere with the lighting by gas of some of our manufactories and other buildings. Yet it is evident that it will be in increasing request for many purposes connected with our leading industries, and more especially as regards the making of iron and steel and in motive power for engines. Coal is now giving way to it, and must continue to do so for many purposes, and the result will be a saving of millions of tons annually by the use of gas. Coal, of course, will still be required for gas making and other purposes, but not by any means to the extent it has been. Electricity, too,

INDIAN PHOENIX.—Extract from letter from the company's manager, dated May 1: Since my report of last week we have excavated foundations for eight intermediate gearing, and placed the foundation logs for extended frame timbers (20 logs, has been cut, brought in, dressed, and ready to fit. The

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Mining Correspondence.

BRITISH MINES.

ANDERTON.—W. J. Bowhay, May 24: We are busy dressing our next parcel of tin, and expect to have a good batch ready for market in a fortnight. We left a good pile on the floor when we sold the last lot and we shall do the same this time, so that we are now able to make monthly sales. The lode is looking splendid. It is now about 12 ft. wide, and tiny throughout, with many very rich bars. I have assayed some, and not by any means the richest we have, and it gave a result of over 9 cwt. to the ton of stuff. We have a stope like a railway tunnel, the stonework holding down rich, and rising up to grass. I never saw a better lode in my life. It is certain we are in the champion lode of the district, and all the tin formerly taken out of Anderton and Rixhill Mines has been taken from rich side lodes. This new lode lately discovered, which we are now stopping, runs eastward in Anderton for many hundred fathoms, and westward all through Rixhill set in maiden ground. These lodes will not be run out in the present generation or the next.

ASHBURN UNITED.—William Garland, May 24: Setting report for four weeks ending June 17, and measurements for four weeks ending May 20: The 40 fm. level west, on north branch, has been extended 1 fm. 4 in. in an unproductive lode, and has been suspended. The 40 fm. level west, on south branch, has been extended 3 fms. 4 ft. 6 in. in a large lode, which produced for the first 6 ft. 1 ton of lead ore per fathom, but has since become unproductive; the lode in the present end is large and promising; set at 4 ft. 15s. per fathom. The rise in back of the 40 fm. level, west of footway rise on the junction of the two branches, became poor after the first 3 ft. and was suspended, and the men put to stop to the west of same in a productive lode, yielding on an average 1½ tons of lead ore per fathom; set at 3s. 5d. per fathom, and to complete putting in stulls. The rise in the high backs in back of the 60, west of Milford's rise, has been put up 4 fms. 1 ft. in ground light for opening, and for the last 6 ft. have met with a branch of lead ore on the hanging wall, yielding 1 ton of lead ore per fathom; set at 4 ft. 10s. per fathom, and 1½ ton per lead ore. The 70 fm. level west has been extended 3 fms. 4 ft. in a large, strong, and unproductive lode; set at 7 ft. 10s. per fathom. The tribute pitches, four in number, are not looking quite so well; set at an average tribute of 5s. 6d. 3d. per ton of lead, and 15s. per ton for blende ore. Dressing of lead and blende is being pushed on regularly, and the machinery is all in good working order.

BEDFORD UNITED.—Telegram, May 22: Lode in the 30 east worth 35s. per fathom. No other change.

BEDFORD UNITED.—H. Trezise, May 24: North Lode: There is no change in the 11s east since last report. The tribute pitches in this part of the mine continue to yield their usual quantity of ore and blende. McCullin's Shaft, Bridge Lode: The engine shaft is sunk 12 fms. below the 30, where the lode is 4 ft. wide, from which water is running freely. The lode is composed of capel, peach, munda, and occasional stones of beautiful grey ore. A small at once is taken and lift, and when completed we shall be in a position to drive two levels east and west of shaft at the 42. The lode in the 30 west is 2 ft. wide, composed of peach, munda, and a little grey ore. The lode in the 30 east is more productive than I have seen it at this level; in the present end it is 6 ft. wide, and worth 40s. per fathom. This end is 8 fms. from the winze sinking below the 20, where the lode is 4 ft. wide, and producing saving work. The drive is continued by the side of the lode in the 20 east; the lode will yield 2 tons of ore per fathom. The winze west of shaft at the 20 is sunk 3 fms.; lode 2½ ft. wide, composed of peach, munda, and a small quantity of copper. We calculate to sample 90 tons of ore and 50 tons of munda, the result of one month's raising.

BLUE HILLS.—S. Bennetts, R. Harris, May 20: There is no change to notice in the rise above the 80 towards the 66 cross-cut from Letcher's shaft. The north lode in the Blue Burrow shaft continues to produce some tin stuff. The 40 east end is worth 5s. per fathom, and the 30 east end 9s. per fathom.

—S. Bennetts, R. Harris, May 23: The Balduin lode in the Gumpas adit west end has proved both in width and value, it is now 3 feet wide, and worth 12s. per fathom.

BWICH UNITED.—Wm. Northey, May 24: Setting report: Saturday last being our usual setting day the following bargains were re-set:—The 12, west end, to be driven, by four men, at 5s. per fathom. The lode is about 3 ft. wide, composed of light blue killas, quartz, blende, copper, and lead ore, worth for the latter 1 s. 10s. per fathom. In the 12 east the lode in the present fore-blast is slightly ordered by cross-joints. I have placed the men to further test a branch of the lode containing a mixture of lead ore, and if it proves satisfactory I shall continue driving on the same. No. 1 stope in back of the 30, to six men, to stope at 22. 15s. per fathom. The lode is strong and well defined, and will yield 1 ton of silver-lead ore per fathom. No. 2 stope in back of the 30, to four men, to stope at 3s. per fathom. The lode looks well and will yield 1 ton of silver-lead ore per fathom. In the 50 east the lode is about 1 ft. 6 in. wide, composed of a soft flookan, quartz, carbonate of lime, copper, and fine sulphur. I have temporarily suspended this point, and put the men to costean in search of a lode or branch in a more northern direction, where I anticipate an outcrop is visible. The stope in back of the 50 has been securely timbered, debris cleaned, and the stope put in good working condition, and relet to six men to stope at 22. 10s. per fathom. The lode will yield from 10 to 12 cwt. of silver-lead ore per fathom. We may reasonably expect this stope to improve as we advance in height. I have temporarily repaired the rods from the 60 to the 100, and all well I shall place a pair of men to drive west on the course of the lode on Monday next. The present appearance of the lode is strong and well defined, carrying cubes of lead ore.—Marvin's Lode: The stope in back of the 15 under adit was re-let to four men to stope at 22. 15s. per fathom. The lode will yield about 10 cwt. of silver-lead ore per fathom. The stope in bottom of the adit was re-let to four men at 3s. per fathom. The lode will yield about 10 cwt. of silver-lead ore per fathom. Pumping, drawing, and dressing machinery is in good order and working well. Dressing carried on energetically.

GARNARVON COPPER.—J. Roberts, W. Darby, May 23: In the sump below the 90 there is nothing new to report. The copper continues to be pinched up and very similar to what it has been for some weeks past. The lode in the stope below the 80 is not quite so rich this week, worth at present about 1½ ton per fathom. In the rise at the back of the 90 the lode has improved a little during the week, and the ground is looking more kindly. Both cross-cuts are much the same as reported last week.

CHURCH BURN (Northumberland).—J. Clementson: General workings continue without alteration. In the north-west forehead about 10 days ago we had a solid rib of ore 18 in. wide, and in the forehead at present there is as much ore, but it is more spread over it.

CLOGAU.—W. A. Ramsay, May 21: During this week we have sunk 6 ft. Small traces of gold were seen on Monday and Tuesday, but since then the lode has got narrower, and the cobalt ore has disappeared. We are not quite sure at first from which end of the winze the gold came, as it was only found after blasting in the loose rock. It now appears to me that it came from the eastern end of the winze. A little gold was seen at the top of the winze, and a few feet below it, and I have therefore decided to stop the ground towards the east driving this week, and if the ground does not improve in that direction to try the west side, which is nearer the original gold shoot, but finally abandoning the shaft. I should like, therefore, to keep all the men in the winze again for this week.

ORROCK BURN.—Jacob Craig, May 19: We have not yet any change in the ends of north and east cross-cuts. The lodes in the north end are now, since we got through the east and west branches, in their regular horizontal position. I have had the stonework cleared out of the shaft below the North Green Rixhill south lode, and there is little or no water running into it this week.

CWM DWYFOR (Brynarian Mine).—J. Davies, May 25: Joseph's Level: We are pushing on the driving of this level at 5s. per fathom; the ground gets tougher as we proceed, the lode has changed its bearing, and is turning more to the east.—Pensarn: The frames are fixed in the new shaft, and the repairs to the water-wheel will be completed by Saturday next, so we hope to get the water out by the middle of next month.

DENBIGHSHIRE CONSOLIDATED.—May 25: The rise in No. 1 lode in the 66 level is in very nice ground, carrying a good quantity of lead ore. In the stope in the ground below the 66 the men have obtained a fair quantity of blue and grey ore. In No. 1 rise in the 112 the yield is very satisfactory; the roof to-day presented a very encouraging appearance. We shall sell a parcel of lead ore to-morrow.

D'ERESBY MOUNTAIN.—J. Roberts, W. Sandoe, May 24: In the No. 6 end during the month nearly 1½ fms. have been driven, but we have not yet reached the rise of ore, yet the lode has a very kindly appearance, and producing strong spots of lead and blende. We do not think that this end will get into lead again in the course of a very short time. The No. 5 end south was, at the beginning of the month, strictly speaking a stope, which was made by the communication with the rise from No. 6, that being in advance of the end about 2 fms.; since we have squared up that stope we have been driving again in the upper part of the end. The lode looks still very well, but there is a poor bed in the bottom of the end; but under that in the stope, which is in advance of the end, the lode looks very well, and just the same value as the other stopes to the north of the rise, which are worth about 2 tons to the fathom for the whole width. The north end at the No. 5 has been driven 1 fm. The lode is very kindly and opening good stopping ground. Behind this end we have knocked a hole through to the great chamber on the hanging side of the lode, which shows that there is more lead standing, and that we shall have to strip down the side of the level for the lead. We sent away the 30 tons of lead yesterday, and are pushing on as fast as we can for another sampling.

DERWENT.—John Morpeth, May 23: Setting list for June: Jeffries' Shaft: Middle Vein: This vein in the 95 east is 4 ft. wide, and produces 15 cwt. of ore per fathom. In the back following the engine No. 1 stope is 4 ft. wide, and produces 16 cwt.; No. 2 is 3 ft. wide, and yields 14 cwt.; and No. 3 is 4 ft. wide, and yields 15 cwt. The flats over this level on north side of vein are very hard and coarse, yielding 15 cwt. of ore per cubic fathom, and worked by two men only.—Westgarth's Shaft, North Vein: The stopes upon this vein, over the 93, have all been resumed. Those east from rise opposite shaft are yielding 15, 15, and 11 cwt. of ore per fathom, average width of vein 4 ft.; and west from same rise the vein is also 4 ft. wide. The produce of the stopes is—No. 1, 13 cwt.; No. 2, 13 cwt.; No. 3, 14 cwt.; and No. 4, 11 cwt. The cross-cut at the 79 is not set.

DEVON FRIENDSHIP.—F. R. D. Daw, W. Gill, May 25: We are pleased to inform you that an improvement has taken place in the 30 end, east of Bennett's shaft; the lode is 4 ft. wide, and producing full 4 tons of arsenical munda per fathom. We beg to remind you that the adit level, on this lode, is 150 fms. in advance of this point, and allowing the lode to be 4 ft. wide throughout you have not less than 7500 cubic fathoms available for stopping as soon as the communication is made with the 30, and the winze put down in the adit. The lode in the rise in the back of this level is 3 ft. 6 in. wide, and producing about 4 tons of arsenical munda munda per fathom. No. 1 and 2 stopes, in the back of this level, are yielding their usual quantities of munda per fathom. We find from an estimate we have made underground to-day that we have more stuff broken than we are able to treat with our present appliances for two months.—Surface operations: We are pleased to inform you that everything is progressing satis-

factorily, and we hope in a few days to start the new wheel we are erecting to one of our crushers.

DRAKE WALLS UNITED.—M. Bawden, May 25: We have made good the communication of the deep adit to Mathew's shaft, and expect to communicate with the engine-shaft by Saturday next. This will complete one of the most dangerous pieces of work we have ever been associated with, and will be of such lasting benefit to the property as is beyond our calculation. Saturday next is our pay and setting, and we will give a detailed report next week. Everything, both underground and at surface, is going on in a satisfactory manner.

EAST BLUE HILLS.—S. Bennetts, May 24: The lode in the adit east end is somewhat improved during the past few days, and is now worth 8s. per fathom. The lode in the 40 east end, too, is more productive than it was a week since, and at present is worth 10s. per fathom. We hope to hole the rise from the adit to the 40 by the end of this month.

EAST CHIVERTON.—R. Southey, May 25: The lode in the 100, west of the engine-shaft, is looking equally as well as when I last reported on it. Good progress is made in driving the end towards the shoot of rich silver-lead gone down in the bottom of the 90. We have commenced to drive east at the 100, where the lode is also large, and with a promising appearance of making good deposits of mineral in depth. During the past week our stopes in the back of the 90 are greatly improved, and are turning out some rich work for silver-lead. At surface the engineer and masons are laying the foundation for our steam-whim, which we have commenced to take abroad in readiness for erection. Tomorrow we purpose stopping the engine for the purpose of erecting a new balance-bob, which we have been very much in need of for a long time past; we calculate to accomplish this and to get the water in fork by next Monday morning so that every underground man will resume work in their respective places. We shall have very shortly now 50 tons of rich silver-lead.

EAST CRAVEN MOOR.—D. Williams, May 25: The south-west cross-cut from the end of the 75 fm. level west of shaft has been driven during the past month 2 fms. 4 ft.; we have passed through a wide and promising lode here, and have placed a pair of men to drive west upon its course, in order to reach the second section of productive ore ground now wrought in the 54 and 30 fm. levels, above which is dipping slightly westward. We shall also continue the cross-cut a little further to thoroughly prove the south part of the lode. A stope in back of the level, in a lode 3 ft. wide, and worth 20 cwt. of lead ore per fathom.—Let for the month at 90s. per ton of dressed ore. A stope in back of the 65 fm. level west of shaft, in a lode 2 ft. wide, and worth 14 cwt. of lead ore per fathom, wrought at 90s. per ton of dressed ore. In the 54 fm. level west upon the horizontal bed the lode is 3½ ft. wide, and worth 20 cwt. of lead ore per fathom. No. 1 stope west of shaft worth 12 cwt. of lead ore per fathom, wrought at 100s. per ton of dressed ore. We have three stopes upon the main lode, by 12 men, worth on an average 30 cwt. of lead ore per fathom, and three pitches at 100s. per ton of dressed ore. The end of the 30 fm. level has reached the nip known to exist between the No. 2 and 3 sections and runs of ore ground, but will, I have no doubt, when clear of its influence again open out into a wide and productive lode. Our surface machinery is in good order and working well. We have weighed off the produce in trip of 32 tons of lead ore, and will have other 32 at the mill by the end of this month.

EAST LONG RAKE.—H. B. Vercoe, May 25: In the 50 fm. level west we have a change, the foreblast being now composed principally of limestone; this leads me to believe that we are through the flat, and I have set the men to drive 1 fathom north in search of the lode, which will no doubt be well-defined, since the lime spar has given place to stone. I quite expect to have a good discovery to report from this point at an early date. The lode in stope in roof of 40 fm. level was now getting very good; we have the lode very richly hauled, the surface some very fine lumps of pure galena, estimated value 1½ ton per fathom. In the 50 fm. level east we have intersected a cross branch, about 6 inches wide, of spar, clay, and lead. I rather expect that this is a portion of the Wagstaff lode, but shall be able to say more about it in a few days. Dressing is progressing well, and we shall sell our usual parcel of ore early in June.

EAST ROMAN GRAVELS.—Arthur Waters, May 25: The 109 south shows three or more divisions of lode, and it is rather difficult at present to determine the main position. We shall prove the east division for a few fathoms, and cross-cut to the other end, and then we shall be able to say more about it. The richest for lead at this time. The 97 south of winze south of shaft is in a strong sparry lode, charged with spots of lead and blende, but not to value. We shall have to go to 5 fms. further here to reach the dip of the ore seen in the 86 stopes. We are stoping in two places in back of this level; lode worth 12 cwt. per fathom. The stopes in bottom of 86 south of winze are 2½ tons per fathom. We are sinking in same level about 30 fms. south of shaft on a promising lode, worth 15 cwt. per fathom.—P.S. I calculate that about 4000 should be charged to capital account this last year, putting up compressor, road-drill, and boiler-house, &c.

EAST UNY.—Wm. Hooper, May 25: We are sinking the engine-shaft below the 82, on Davis' lode; the lode is 3 ft. wide, intermixed with peach and munda. I expect Davis' lode and the Great Flat lode to form junction in a few fathoms sinking, when I hope to see a good improvement. In the 82 west, on Davis' lode, the lode is 4 ft. wide, with a little copper throughout. The stope in the back of the 62 is worth from 2 to 3 tons of copper ore per fathom. The winze sinking below the 40 west, on the Great Flat lode, is producing some good saving work for tin. The 10 end, east of winze-shaft, on Whitford's lode, is 4 ft. wide, and producing a good yield of tin; the adit east of winze-shaft, on Whitford's lode, is from 2 to 3 ft. wide, producing some good stones of tin. Our tribute pitches throughout the mine are producing their usual quantity of tin stuff.

EAST WHEEL ROSE.—W. Skewis, T. Doidge, May 17: Penrose-Innes' Lode: No. 1 stope is worth 15 cwt. of silver-lead ore per fathom. No. 2 stope is worth 8 cwt. of silver-lead ore per fathom and 5 cwt. blende. No. 3 stope is worth 4 cwt. of silver-lead ore per fathom and 2 cwt. of blende. No. 4 stope is worth 15 cwt. of silver-lead ore per fathom. No. 5 stope is worth 6 cwt. of lead per fathom. Every effort is being made to fix the 90-in. engine with boilers and all other parts together with pump lift from surface to adit by the end of this month. Also the fixing of a drawing lift dropped below the adit, together with a large portion of Green's patent machinery for dressing, so as to be able to set the whole of this to work by the 31st of this month. For this purpose we have suspended the work at North Wheel Rose, and are employing all our forces to accomplish the foregoing object, which we trust will be in such a state of efficiency and completeness as will give every satisfaction.

GAWTON.—George Rowe, George Rowe, jun., May 20: The lode in the 117 fms. level east is 3 ft. wide, producing 20 tons of arsenical munda and ore per fathom, and worth 10 tons of ore per fathom. The part of the lode carried in the 105 fm. level east is yielding 19 tons of munda and ore per fathom. The lode in the stope in the back of this level—105—is worth 10 tons of munda per fathom. The lode in the 70 fms. level, east of cross-cut, is producing 12 tons of munda per fathom. The lode in the rise above the 70 is producing 6 tons of munda per fathom. We are crushing the big rocks of munda every day with the new stone breaker and the Robey engine, and effecting a great saving in manual labour, and working admirably.

GORSBURN.—H. Rowe, May 24: The lode in the 108 fm. level driving north is now about 6 ft. wide, but unproductive; it contains a little blende, but not sufficient to save.

GLASDIR ARGENT COPPER (Merioneth).—John Parry, May 24: The western stope, No. 1, improves in quality—less sulphur. No change in the quality of the ore in any of the other stopes, &c. I am lengthening the pass west of No. 2 shaft, so as to have a further trial on this part of the mine. We have sent off three truck loads from Dolgelly this month, and are loading the fourth with No. 1 ore. The long continued drought made us short of water for a few days, but we got it again by getting a pump set up to pump water to the laid down from his lake, which will cost about 20s., and that done any quantity of water is obtainable at all times. Wheels are going space to-day. No hitches now. Mr. Readwin proposed to personally superintend the amalgamation trials all this week.

GLASGOW CARADON CONSOLS.—W. Taylor, W. J. Taylor, May 23: The shaftmen have completed most of their bargain about tip-plate at the 114, and we are preparing to lay on tram-road there. We shall now commence stoping the lode in back of the 114 level, which we have a good deal of work to do. The 114 level is not much driven, but the lode is very rich, and we are having been about the plat. We shall push it on again now. Lode at present worth 7s. per fathom, and we expect it to improve; ground favourable. In this level west the lode is disordered by a spar cross branch, worth about 6s. per fathom. The 102 west Harvey's lode worth 10s. per fathom, and likely further to improve ground easy for working stopes in back of this level worth 10s. and 12s. per fathom. The 90 west on this lode is producing stones of ore, and we hope getting into the same run of ore ground as the level below (102). Two stopes in back of the 90 west worth 12s. and 14s. per fathom respectively. No change in the tribute pitches to notice.

GODDARD'S LEAD.—R. H. Vivian, May 25: We are sinking the engine-shaft under the adit as fast as possible. The stoping east of this shaft is regularly continued. Each of these points are looking exceedingly well, worth 10 cwt. of lead and 10 cwt. of blende per fm.

GOODEVERE.—R. Knott, May 24: The timbering of the shaft referred to last week is completed, and preparations will at once be made for hoisting shears, fixing crank, flatbed, &c. Nothing further to report on underground.

GURDIP AND MELLBY.—May 25: The 90 west looks better this morning, and we are urging on all we possibly can to get to the great north and south lode. The tribute pitches are producing as for a long time past.

GOVER CONSOLS.—W. Hooper, May 23: At the 20 there are six men driving west on the course of the great main lode, which is greatly improved in appearance, and is yielding some good work for tin; in fact, every fathom driven on this lode proves its improvement, and a large section of tin ground at this point is laid open for stopping, which we are commencing at once.—Gover Lode: The tribute pitch is much the same as last report. We have now a better lode in the lode going east, as spoken of in my last report, which the old miners drove by the side of, and I find there are some very rich stones of tin in it. The lode is about 18 in. wide. I should strongly recommend that this be driven on for the course of a few fathoms. A very important point I consider that the western level be cleared to prove the real value of the lode going west. By the way of conclusion, I should strongly and earnestly recommend that Tamblin's engine-shaft be cleared up another 10 fms. When those points recommended in my reports are reached, I have no doubt whatever that every word given in my reports will be accomplished.

GREAT LAXEY.—W. H. Rowe, May 24: The lode in the 259 end north is unchanged in character, but good progress is made in driving, and at the present rate we shall soon come up with the run of productive ground above. The 247 end continues to be worth 20s. per fathom; we hope to push forward this driving with greater speed to be in time to meet the new winze from the 235, about 12 fms. distant. The intermediate drive and stope is still worth 50s. per fm., and as it is now a good distance from the winze we have commenced a rise directly under in the roof of 247 to prove the ground with a view to hoisting and working it to greater advantage. The new winze is worth 12s. per fathom. After a tedious and rather difficult piece of cross-cutting in the 235 north, I am glad to say we have just reached the east branch of the lode, and after holing to the winze we shall at once lay out to continue this driving northward towards Dumbell's by drill. No. 1 stope in roof is worth 20s. per fathom, and No. 2 12s. per fathom. The rest of the workings in the deep mine show no new feature of importance.—Dumbell's: There is a coarser description of lode just at present in the 235 north, and worth 12s. per fathom, and 10s. per fathom. Judging from the position of this end with regard to the level above, we may expect an improved lode here again very shortly. The 215 north continues opening good ground, worth from 25s. to 30s. per fathom, but is scarcely so good in the extreme end at this moment. We have recently resumed sinking a winze in the 200 north, where the lode is small, but fairly good for ore; present value

18s. per fathom. Very little alteration, on the whole, has taken place in the various stopes in this part of the mine of late. The stope and rise in the 85 north are respectively worth 50s. and 20s. per fathom, and as the 60 end is now in the proper position, we have commenced a direct cross-cut towards the east branch, aiming a little to the south of rise, which should the ore continue upward, will allow of a slight dip as is the case below.

GREAT WEST CHIVERTON.—John Curtis, May 15: There is no change to call for a remark in the lode in the deep adit west; it is yielding lead and munda, but not enough to value. I find the water is less in the winze, where we have some good stones of lead, and in a week's time I purpose putting the men there to give the lode a further trial.

GREAT WEST CHIVERTON.—John Curtis, May 24: The lode in the deep adit is 3 ft. wide, with spots of lead and blende, also more munda, on the whole looking more kindly for producing mineral than for some time past.

GREEN HURTH.—J. Polglase, May 19: The mine is cleared of stuff, and we shall set some of the stopes in the back of intermediate level to-morrow, also a rise in back of 31 north; there is a good prospect of ore at this point. Swan's shaft is the same in value—5 tons of ore per fathom. The lode in the bottom level north is worth 3 tons per fathom. Stope in back of bottom level the 4 tons per fathom. As the stopes in back of the 30 are opened, I will give you the values. The foundation for the new engine is finished, and preparations are being made for the main beam. Dressings going on well.

GWYDYR AMALGAMATED.—J. Roberts, W. Sandoe, May 24: Clementina: The 44 end is looking more kindly, and producing faces of lead and blende. The winze in the bottom of the 34 is very much the same in appearance and value as we reported it last week. The 25 end north is producing stronger spots of lead than it was, and we shall soon get into the lead ground.—Aberilly: The lode in the stope is looking for blende just as it has been for some time, but there are stronger patches of lead in the blende. The rise is without change. It will be remembered that we are carrying only a very small portion of the lode in the rise, and does not at all test value as a whole.

HINGTON DOWN.—Thomas Richards, May 24: The engine-shaft is now in regular course of sinking below the 25 fm. level, and fair progress is being made. The lode in the 25, east of the shaft, is composed of capel, quartz, prinn, and munda, and in places with stones of copper ore. In the 12, east of the shaft, the lode contains capel, quartz, peach, prinn, arsenical munda, and occasional good stones of copper ore. In the deep adit west, east of the south cross-cut, there is no material change. The ground in the cross-cut south of No. 2 lode is favourable. The stope in the back of the 12 fm. level, east of the engine-shaft, will produce about ½ ton of copper ore per fathom.

KILLIPRETH.—J. Nichol, J. Tamblin, May 25: Engine-shaft: We are making fair progress in driving the 50 east and west of shaft. The lode in the 40 end west is worth 40s. per fathom. The 40 end east is worth 25s. per fathom. The rise in the back of this level is worth 15s. per fathom. The stope just behind the rise is worth 18s. per fathom. The 30 end east is improving, now worth 20s. per fathom.—Hawke's Shaft: The lode in this shaft sinking below the 30 is 3 ft. wide, but at present unproductive. The winze sinking below the 30 east of shaft is worth 40s. per fathom. The three stopes in the back of this level are worth on an average 15s. per fathom each. The stope in the bottom of the 20 east of shaft is worth 12s. per fathom. The stope in the back just over the above is worth 6s. per fathom. The stope in the back of the 10 east of rise is worth 10s. per fathom. The other bargains are much the same as when last reported.

KIRK MICHAEL.—R. Rowe, May 17: There is no special change to notice to-day in either of the cross-cuts at the 20. The south one is still in promising ground; part of the slide on which we are driving contains quartz strongly charged with blende. In the north cross-cut we have not yet intersected the lode; the rock contains patches and strings of lead.

KIRK MICHAEL.—R. Rowe, May 24: There is no change yet in either of the cross-cuts at the 20 fm. level, in both the rock is charged with lead, and in the north cross-cut we expect to intersect the lode every day.

LADY BERTHA.—T. Gregory, May 25: The lode in the 40 fm. level east will produce 8 tons of munda and copper per fathom, and is letting out water freely. The stope in back of this level will produce from 5 to 8 tons per fathom. Lode in the 53 west will produce 5 tons of munda, intermixed with copper, per fathom. Stopes below the 30 west of Rowe's winze will produce 5 tons per fathom. We are drawing and dressing for another shipment of copper and munda as fast as the nature of the work will admit.

LANGFORD.—R. Goldsworthy, May 13: The adit level will be cleared and secured, and launders laid down necessary to carry the water over all the old workings, shafts, and winzes in the bottom of the adit as far west as the engine-shaft by the end of this week. Mr. Mathews was here yesterday, and said he would send on another engineer on Monday next. The masons are now engaged building the boiler-house, &c.

LANGFORD.—R. Goldsworthy, May 25: The masons are getting on well with building the boiler-house. The engineers are busy at work on the winding engine. The bob-plate stools and spring beams are in place, and preparations are now being made to pull in the two boilers. All other work is being pushed forward as fast as the nature of it will allow.

LEAD ERA.—J. A. Kide, May 25: The ground in our driving west is now changing from the argillaceous substance we have met with heretofore to that common but not unfavourable deposit of horse clay in which most of the ore found in the flat are embedded. I will set the end on Saturday.

LLANDEGLA.—H. Hotchkiss, May 24: There is no material change to notice since my last report.

MELLANEAR.—John Gilbert, May 24: In the 30 cross-cut we are meeting with small branches of spar, mixed with munda, and the ground altogether is getting more mineralised, and is still very easy for driving. We have driven through the floors of spar mentioned in our last report in the 70 cross-cut north of main lode, east of Gundry's shaft, and the end is again in a light-coloured killas rock; the lode is 5 ft. wide, and yielding 3 tons of copper ore per fathom, and a great deal of fluor-spar in the 30 driving west. The lode is 4½ ft. wide in the 100 driving west of shaft, yielding 2 tons of ore per fathom, letting out a large stream of water, and looking promising for further improvement. In the 100, driving east of shaft, the lode is 6 ft. wide, and yielding 1½ ton of ore per fathom, and the men are making very good progress in driving. The lode is 3 ft. wide, and yielding 2½ tons of ore per fathom in the 110 driving west of shaft, on the south part. In the 120 driving east of shaft, on main lode, the lode is 6 ft. wide, yielding 2 tons of copper ore per fathom, and occasional stones of tin, presenting very good indications. The lode is 3 ft. wide, and yielding 1 ton of ore per fathom, but at present rather disordered in the winze in bottom of the 40, west of Gundry's shaft. In the winze in the bottom of the 50, west of shaft, the lode is 4 ft. wide, and yielding 2 tons of ore per fathom; this winze is about 3 fms. in advance of the 100 end. In the winze in bottom of the 100, east of shaft, the lode is 4 ft. wide, and yielding 1 ton of ore per fathom. In the 50, driving east from the old engine-shaft, the lode is 3 ft. wide, yielding occasional stones of copper ore and blende; there has been nothing done in this level until now east of the shaft. The lode in the 110, driving east from the old engine-shaft, is 2½ ft. wide, yielding a little munda and copper ore, but not sufficient to value. In the 110, driving west, the men cut level still being driven in a north-west direction, and last night the men cut some more water; the ground is also getting mixed with killas, and showing indications of nearing a lode.

MONKSTON.—J. Goldsworthy, May 24: The new lode is not yet reached in the 30 cross-cut; the sound from the winze is very plain in the cross-cut, and is also plain in the winze from the cross-cut; judging from the same the lode is close before the end. The lode in the winze continues its size and value. When the communication is effected the engine will be sent to surface in large quantities. The winze is rather difficult to get the stuff through owing to the turns in the lode. The machinery is working well.

MORFA DU.—T. Mitchell, May 24: I am pleased to inform you the lode at Ida shaft has considerably improved this week, both for copper and blende. It will now yield 3 tons of copper ore and 3 tons of blende per fm. The blende is solid and of good quality, and the copper ore will produce between 4 and 5 per cent. The lode has every appearance of further improvement. The pitch in back of the 48 has also improved this last day or so, and will yield blende of better quality. The lode is looking very much better. We shall commence to-morrow to carry down another cargo of blende for shipment.

MONA CONSOLS.—T. Mitchell, May 25: The lode in the sink in the western part of the mine continues to present a very promising appearance, and is thickly spotted with rich yellow ore. The engine has arrived safely at the mine.

MOUNTS BAY CONSOLS.—Report by Captains Wm. Argall, Jno. James, Jno. Rowe, and Wm. H. Argall: Trebarvah: The shaftmen are still engaged cutting ground, &c., to sink winze below 62 level west of Richard's shaft in the bunch of copper in the bottom of the level worth 10s. per fathom, and we hope to commence to sink in a few days. During the past month we have driven the cross-cut south-west of engine-shaft 3 fms., and have re-set to six men at 6s. 10s. per fathom; in the present end we have occasional spots of copper. Below the 50 level we have two more levels to be driven, one at 10s. in the 12, and the other at 15s. in the 17. On the north lode we have a tribute pitch working for tin at 16s. in the 17. We are preparing another parcel of copper ore, which will be ready for sale in the coming month. All the machinery throughout the mine is working very well.—Sydney Cove: The engine-shaft is cleared 6 ft. below the bottom of the

MYNYDD GORDU.—Thomas Kemp, May 24: The part of the lode opened on by the 48 end, west of cross-cut, for the width (5 ft.) is of the same value as reported last week, worth from 107. to 124. per fm. In the extreme end of the forebore to-day a change appears to be taking place in the lode, which is of a more friable nature, and doubt is as to whether we shall be able to report the ground is more favourable for opening, and also more productive for mineral. The forebore of No. 1 cross-cut, north from this level, is in a fine lode, composed of calc spar, quartz, and kilaas, strongly intermixed with mudic, and is letting out water freely, and from indications it should soon enter the ore gone down in No. 1 stope under the 34. In No. 2 cross-cut north we have not met with anything of importance since we passed through the branch referred to in previous reports; consequently I have withdrawn the men, and have put them to extend back east towards the winze on the said branch, which is worth 67. per fathom. The part of the lode carried by the 46 end, east of cross-cut, is composed of dark gossan, ribs of calc spar, and quartz of a loose nature but of a very promising description, and I am under the impression that this change will shortly lead us to better results. The different stopes throughout the mine are equal in value to last week's valuation.

NEW KITTY.—Wm. Vivian, May 28: The 24 end west has improved, is producing rich stones of tin, and is worth 55. per fathom. Good progress is being made in sinking the engine-shaft below the 36.

NEW WEST CARADON.—N. Richards, May 24: There is no change to notice throughout the mine since the report for the general meeting last week. All points are being worked on as fast as the nature of the work will admit.

NORTH BUSY UNITED.—J. James, May 25: We shall complete the engine-shaft to the 32 this week, when we shall at once case and divide the same, and commence to drive north to intersect the lode; and looking at the improved character of the ground there is every reason to expect a productive lode. The 30, driving east of Flat Rod shaft in Old Mine has improved, now worth 64. per fathom; a very promising lode. The stope in back of the 10, and other points of operation are the same as last reported.

NORTH GREEN HURTH.—J. Polgas, May 19: The deep level is making fair progress; price for driving and tramming the stuff 50s. per fathom. We are driving south-west on the vein in which the air-shaft was sunk; the lode is about 10 in. wide, and producing good stones of ore; price for tramming and driving 50s. per fathom. The price for driving under the road is 25s. per fathom. No change here.

NORTH HERODSFOT.—T. Trelease, May 25: The lode in the 117 end continues about 1 ft. 6 in. wide, and is still producing good saving work. We have commenced to stope in the back of this level, where the lode will yield 8 cwt. of lead ore per fathom. We shall stope the ground at the north end of the shaft; also such as the end is in far enough to enable us to do so. The pitch in the 80 is yielding 3 cwt. of ore per fathom. There is no change to notice in the cross-cut at this level.

NORTHERN LEAD.—Thomas Tonkin, May 25: There is no change in the nature and yield of the tribute pitches since reported on last week, the yield at both Stotsfield Burn and Brandon Walls being fully maintained.

OKEL TOR.—H. Bulford, J. Rodda, May 24: New Shaft East: We find the shaft has come down a little to the south of the rise, and the eastern end of shaft is about 3 ft. to the east of the northern end of rise; this will necessitate our cutting down ground for 10 ft. in order to bring the rise in line with shaft. We intend to put on a strong force immediately to complete shaft to the 80 with all dispatch, as we are now able to hang lines for this purpose. Since our last report the stopes in western part of mine are not looking so well.

OLD SHEPHERDS.—R. Nancarrow, J. Nancarrow, May 23: We have pleasure in handing you our report of progress made in draining the water from the south mine. Though we have no steam capstan erected we succeeded yesterday in completing the 13 in. drop lift 25 fms. below the adit level, and expect to fork the water to that depth in a few days. The 80 in. engine works excellently well. We have a good supply of Green's dressing machinery, which works day and night dressing the halvans, and we hope shortly to get a parcel of lead marketable. It would be far more satisfactory if we could return double the quantity in the same time. We are making good progress in clearing the adit level east and west on the course of the main lode, where we have broken splendid stones of lead ore 10 fms. from surface. Our principal object in clearing those levels is to take up all the water we possibly can and ventilate the mine. Other preliminary works—building dry house for the miners, also fixing weight bridges, &c.—are being carried out very satisfactorily.

FAIRY'S COPEL CORP.—E. Mitchell, May 24: The 90 west, on No. 2, continues to go forward in promising looking ground, and we are expecting to meet with something valuable soon in this direction. The 90 east, on No. 2, is showing some sulphur, with a little copper ore intermixed, and the ground has a very promising appearance. The lode in the rise in back of the 90 has improved a little this week, and will now yield about 3½ tons of copper ore per fathom. We find more copper standing in the side. No change worthy of notice at any other point.

PELNY WOOD.—T. H. Bennett, May 25: We continue to push forward the drive, and are making fair progress; the ground is a little stiffer, but the lode increases in size, composed of gossan, quartz, carbonate of iron, and occasional stones of ore, and as we are approaching so near the junction of No. 1 lode regard the present prospects encouraging.

PENNANT.—May 25: The stopes and indeed all our operations are, as for some time past, yielding good quantities of sulphate and carbonate of barites, and to-morrow we shall sell a parcel of lead. The new engine works splendidly.

PENHALLS.—S. Bennett, J. Goynne, May 20: In the 80 east end from boundary the lode is being desued, and consequently there is no change to notice, nor is there any further discovery in the 80 east-cut north. In the 60 cross-cut north the western section of the last lode intersected has just been met with; it is 1 ft. wide, of a promising appearance, but nearer the cross-course is poor; this lode will be opened on forthwith. The winze below the 55 east is worth 204. per fathom; and the 40 west, on the north lode, is worth 84. per fathom.

PHENIX AND WEST PHENIX UNITED.—John Truscott, May 25: Setting Report: Old Sump Shaft: The 150 west to drive in a southerly direction by two men at 161. per fathom for the purpose of intersecting the lode. The 132 to drive west by four men at 117. per fathom; lode worth for part carried, 5 ft., 157. per fathom. The 120 to drive west by four men at 94. per fathom; lode producing a little tin. To sink a winze in the bottom of this level, by side of lode, by four men at 41. 10s. per fathom. To stope the back of this level by six men at 54. per fathom; lode worth 144. per fathom. The 110 to drive west by two men at 74. 10s. per fathom; lode worth 34. per fathom. To stope the bottom of this level by four men, where the lode is worth 254. per fathom. The 100 to drive west by four men at 34. 10s. per fathom; lode unproductive. No. 1 stope in back of this level by four men at 144. per fathom; lode worth 144. per fathom. No. 2 stope in back of this level by four men at 44. per fathom; lode worth 154. per fathom. No. 3 stope in back of this level by four men at 44. per fathom; lode worth 84. per fathom. No. 4 stope in back of this level by four men at 34. 10s. per fathom. No. 5 stope in back of this level by four men at 44. 5s. per fathom; lode worth 104. per fathom. The 80 to drive west by four men at 54. 10s. per fathom; lode worth for part carried, 6 ft., 67. per fathom. No. 1 stope in back of this level by six men at 41. 10s. per fathom; lode worth 144. per fathom. No. 2 stope in back of this level by six men at 41. 10s. per fathom; lode worth 144. per fathom. No. 3 stope in back of this level by six men at 41. 10s. per fathom; lode worth 144. per fathom. No. 4 stope in back of this level by six men at 41. 10s. per fathom; lode worth 144. per fathom. No. 5 stope in back of this level by six men at 41. 10s. per fathom; lode worth 144. per fathom. No. 6 stope in back of this level by six men at 41. 10s. per fathom; lode worth 144. per fathom. No. 7 stope in back of this level by six men at 41. 10s. per fathom; lode worth 144. per fathom. No. 8 stope in back of this level by six men at 41. 10s. per fathom; lode worth 144. per fathom. No. 9 stope in back of this level by six men at 41. 10s. per fathom; lode worth 144. per fathom. No. 10 stope in back of this level by six men at 41. 10s. per fathom; lode worth 144. per fathom. No. 11 stope in back of this level by six men at 41. 10s. per fathom; lode worth 144. per fathom. No. 12 stope in back of this level by six men at 41. 10s. per fathom; lode worth 144. per fathom. No. 13 stope in back of this level by six men at 41. 10s. per fathom; lode worth 144. per fathom. No. 14 stope in back of this level by six men at 41. 10s. per fathom; lode worth 144. per fathom. No. 15 stope in back of this level by six men at 41. 10s. per fathom; lode worth 144. per fathom. 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ground at the 150 for cistern, preparatory to fixing a standing lift; this done, sinking below that level will be resumed at once. The lode in the 175, east end, is worth 15s. per fathom for the part carried. The men stripping down the lode behind said end are breaking very fair stamping work. The 150, east end, is letting out much water, and worth for tin 14s. per fathom. There is no other change worthy of any notice.

WHEAL JANE—James Reed, May 24: Great Flat Lode: In the deep adit cross-cut north I have for the present suspended the driving, and put the men to rise in the north part of the lode where it is strong and masterly, worth for tin 12s. per fathom.—Ready Money Lode: This lode in the winze in the bottom of the deep adit, west from No. 2 cross-cut, is 3 ft. wide, worth 8s. per fathom. I have taken the men from the 16, driving east, and put them to rise against the winze where the lode is 3½ ft. wide, worth 9s. per fathom. The slope in the back of the deep adit, west from No. 2 cross-cut, is worth 8s. 10s. per fathom. The slope in the bottom of the deep adit, east from cross-cut, is worth 8s. per fathom. The slope in the bottom of the shallow level, east from No. 1 cross-cut, is worth 7s. 10s. per fathom. In the driving east from No. 1 cross-cut, the lode is 5 ft. wide worth 8s. per fathom. The mine is now in fork to within 9 ft. of the 80, or bottom of the mine. Our progress is slow, having a quantity of stuff to clear to make way for the drawing lift. We have drawn from the surface the old 14 s. pitwork, rods, &c., from the 70 to the 80. We shall commence to work the oreground in the bottom of the 70 in the course of a day or two.

WHEAL PEVOR—W. T. White, T. C. King, May 24: We have not yet cut the lode at the 100 ft. level, the large lode that came in from the south at the 90 most have carried it with it. Should this be the case we have about 5 fms. more to drive to reach it. The cross-cut is now in 7 fms. from shaft, and the shaft of the ground is very good. We have still a strong belief that we shall meet with a good lode at this level. Since we reported last we have holed the winze and rise between the 70 and 80 ft. levels on the middle lode, thus have made available a good section of stopping ground. The 80 ft. level west is improving, there being a very good lode of tin in the end. All the other bargains are without change since last reported.

WHEAL PRUSSIA AND CARDREW UNITED—Setting Report: Prussia Lode: The 15, under adit, to drive east, by two men, at 6s. 10s. per fathom, the lode is improving in size, and produces a little tin. A rise in the back of the 40 east, by two men, at 10s. per fathom; lode worth 10s. per fathom. A slope in the bottom of the 30 east, by four men, at 4s. per fathom; lode worth 12s. per fathom. The 30, to drive west, by two men, at 6s. 10s. per fathom; lode worth 12s. per fathom. A slope in the back of this level, by four men, at 3s. 5s. per fathom; lode worth 12s. per fathom.—Cardrew: The shaft men are now making good progress in cutting the ground for the pole, cistern, &c., and hope to be able to fix the cistern next week. Owing to the hindrances in the shaft we have not made during this month much progress in driving the 60 cross-cut north, but are pleased to say it is again being pushed forward by four men, at 8s. per fathom. At the 30 cross-cut north we have put a pair of men to drive west on a branch which produces a little tin, not enough to value. The cross-cut is being continued by four men, at 8s. per fathom. At surface we are busily engaged about the erecting of the winding engine, &c. The loading is completed, and the engine is being fixed on same. The new shaft is being pushed forward with all speed. We hope to accomplish this work in the time specified. All other work is progressing satisfactorily.

WHEAL UNY—W. Hambly, Wm. Prophet, Jas. White, May 25: We have no particularly change to report on since our last. All the points in operation maintain their value and are being pushed on with all speed both at underground and surface.

NEW TRUMPET TIN—Capt. Josiah Thomas, of Dolcoath Mine has inspected this property and has reported most favourably of the prospects.

WEST HOLWAY—The new engine-shaft is down 137 yards from surface and still in a splendid lode. Tin prospects, therefore, are excellent.

GREAT HOLWAY—This mine maintains its value. Another point likely to produce well is the north and south lode at the 80. Capt. Harris reports rocks of lead coming therefrom weighing ½ cwt. each. The various points are being prosecuted with considerable energy and great judgment.

TREGEMBO—This mine is said to be far surpassing the expectations of its proprietors. The adit end is now producing (from an assay made a few days ago) excellent tin. The rock gave an assay of 3 cwt. 2 qrs. 14 lbs. of tin to the ton of stuff. Early dividends are expected.

DEVON FRIENDSHIP—As has been already stated, there is laid open an immense quantity of valuable ore ground below the adit, which will be still greater when the communication between the 12 and 30 ft. levels is effected—in about a week hence; in fact, there is more stuff broken than they can at present deal with at surface, and most of the levels, &c., are so full that they have for the time been obliged to lessen the number of hands underground. The quantity of tin also increases in the deeper levels. When the two calciners are at work the returns will be considerably augmented, and leave a good profit.

EAST WHEAL ROSE—The starting of the 90-inch engine has been unavoidably postponed from May 31 to Saturday, June 3.

WHEAL COATES—The ordinary four-monthly meeting of shareholders was held on Thursday last. There was a full attendance. This is as it should be, and it is very evident that adventurers in mines cannot take too great an interest in the management of their own affairs. A satisfactory financial statement was presented. This was not looked for, as a call of 2s. per share was made four months ago, the whole of which amount, excepting about 60s., was shown to be now at the company's bankers, notwithstanding that the costs have been about 600s. per month, whence it is claimed that a great change has been effected in the working of the property.

CARNARVONSHIRE GREAT CONSOLS LEAD—We are informed that they have sampled 40 tons of lead for one month's working. The mine continues to look quite as well as for some time past.

WHEAL BASSET—This mine is rapidly confirming the opinion expressed in February, 1879, when it was resolved to erect an 80-inch engine on Lyle's shaft in the north part of the sett. Since that time hundreds of fathoms have been driven by the means of boring machinery. A correspondent writes that it is probable that no mine in Cornwall can show 200 fathoms of cross-cuts driven in two years and 100 fathoms on the course of the lode, which have opened backs of about 200 fathoms in height. The 137 cross-cut, extended north about 60 fathoms, is now driven over 4 fathoms in the lode, but no footwall reached; the nearer the footwall and the richer the lode is becoming, until now we should not be over sanguine in reporting the lode, as far as seen for the width, as worth 60s. per fathom. The stamps will go to work next week, when it is believed regular sales of tin will be made and the shareholders rewarded at an early day for their courage and outlay.

CASSELL'S PUBLICATIONS—Science for All, part 55, contains articles on a Piece of Sulphur, by Mr. F. W. Rudler, curator of the Museum of Practical Geology; on Vortex Rings, by Mr. Wm. Aokroyd; on the Recent and Modern Animals of South America, by Prof. P. M. Duncan; on a Mushroom, by Mr. W. G. Smith; and on Rock-making Rhizopods, by Mr. P. H. Carpenter. The History of Protestantism is completed with the present 36th part, which is issued with three extra sheets and a general index to the entire work. Canon Farrar's Life and Work of St. Paul, part 5, contains the interesting chapter on the conversion of St. Paul. Knight's Dictionary of Mechanics extends from Seal Engraver's Lathe to Sewing Machines.

AUSTRALIAN STATISTICS—Amongst those just gazetted as having received the honour of the Companionship of the Most Distinguished order of St. Michael and St. George is Mr. Henry Henlin Hayter, the Government Statist of Victoria. The Mining Journal has been constantly indebted to Mr. Hayter's courtesy for early copies of his valuable and interesting statistics concerning the mines and industries of Victoria, and from the precision and completeness which have always characterised his compilations there can be no question that he well deserved the honour conferred upon him.

DIED, at Liskeard, Cornwall, on May 24, Captain JOHN SIMMONS, aged 60 years. Deceased was for 25 years mineral agent in Cornwall under the Duchy, and was well known throughout Devon and Cornwall, and was much respected. His death is attributed to typhoid fever, contracted at the unsanitary town of Helston.

GOLD AND SILVER—Messrs. FIKLEY and ABELL (May 25) writes: The shipments of gold from America have continued during the week, and the amount now at sea is about 1,545,000. Of this large sum 450,000 is on account of the Italian loan. The demand for export has somewhat fallen off, and 590,000 has been sent into the Bank; further amounts will follow. The only withdrawal has been 19,000 in sovereigns. The steamers from New York have brought 710,000. The steamers from India have brought 7000. The steamers from Australia have brought 8700. Total 723,700. The Nile has taken 5000 to the West Indies and 1 Nizam 18,500 to Bombay. There has been no revival of the continental demand for silver, but the orders for the East have been sufficient to keep the demand tolerably steady at 52½d. per oz. standard. The arrivals have been unimportant; they are, 13,310, from Buenos Ayres, and about 20,000, from New York. The Nile takes 15,400 to the West Indies; the Nizam 38,900, and the Mirapore 11,400, to India.

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The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, MAY 26, 1882.

IRON.	£ s. d.	£ s. d.	TIN.	£ s. d.	£ s. d.
Pig, GND, f.o.b., Clyde...	2 7 3/4	—	English, ingot, f.o.b. 101	0 0-102 0 0	—
" Scotch, all No. 1...	2 8 0-2 8 3	—	" bars "	102 0 0-103 0 0	—
Bars, Welsh, f.o.b. Wales	5 10 0	—	" refined "	103 0 0-104 0 0	—
" In London	6 0 0	—	Australian "	97 10 0	—
" Stafford...	7 5 0-7 15 0	—	Banca "	nom.	—
" In Tyne or Tees "	6 5 0-6 10 0	—	Straits "	97 10 0	—
" Swedish, London...	9 10 0	—	COPPER.		
Rails, Welsh, at work...	5 10 0	—	Tough cake and ingot	71 0 0-72 0 0	—
Sheets, Staff., in London	8 10 0	—	Best selected "	72 10 0-73 0 0	—
Plates, ship, in London	9 0 0	—	Sheets and sheathing	79 0 0-80 0 0	—
Hoops, Staff., "	7 10 0-7 12 6	—	Flat Bottoms "	82 0 0-83 0 0	—
Nail rods, Staff., in Lon.	6 15 0	—	Wallaroo "	73 0 0	—
STEEL.			Burra, or P.O.C. "	72 0 0	—
English, spring "	12 0 0-18 0 0	—	Other brands "	nom. 66 0 0-68 0 0	—
" cast "	10 0 0-15 0 0	—	Chili bars, g.o.b.	68 0 0	—
Swedish, keg "	15 0 0	—	PHOSPHOR BRONZE.		
" fag. ham. "	15 10 0	—	Alloys I, II, III, and IV.	£125 0 0	—
English, pig, common	14 5 0-14 10 0	—	" VI. and VII.	140 0 0	—
" " L.B. "	12 6 14 17 6	—	" XI, Spl. bearing metal	117 0 0	—
" " W.B. "	15 0 0	—	BRASS.		
" sheet and bar "	15 0 15 5 0	—	Wire "	7½d. —	—
" pipe "	15 10 0	—	Tubes "	9½ —	—
" red "	17 10 0	—	Sheets "	8 —	—
" white "	21 0 0-23 0 0	—	Yel. met. sheath. & sheets	6½d. 6½	—
" patent shot "	17 10 0	—	TIN-PLATES.		
Spanish "	14 2 6-14 5 0	—	Charcoal, 1st quality	1 1 0-1 2 0	—
Metal, per cwt.	15 0 0-16 0 0	—	" 2nd quality	0 18 0-0 19 0	—
Ore, 10 percent per ton	20 0 0-25 0 0	—	Coke, 1st quality	0 17 0-0 18 0	—
QUICKSILVER.			" 2nd quality	0 15 0-0 16 0	—
Flasks, 75 lbs. var.	6 0 0	—	Black "	per ton 15 10 0	—
SPELTEN.			Canada, Staff. or Gla.	12 0 0	—
Silesian "	17 0 0-17 10 0	—	at Liverpool	12 0 0	—
English, Swansea "	18 0 0	—	Black Taggers, 450 of	30 0 0	—
Sheet zinc "	21 0 0-22 0 0	—	14 x 10 "	—	—

* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; IX 6s. per box more than 10 quoted above, and add 6s. for each X. Terne-plates 2s. per box below tin-plates of similar brands.

REMARKS.—This week some of our markets have been characterised with some little animation, and here and there a tolerably large business has been transacted, although it is to be feared that what has been done has been more of a speculative nature than to meet the actual requirements of the trade. This is a matter of some regret, as it leaves the conclusion that where prices have advanced, and been maintained at the enhanced rates, that they are supported in great measure by artificial means, and consequently a collapse might at any time take place. But these remarks, perhaps, refer only to those metals in which speculation greatly exists, and not to the trade at large. If we look at the legitimate demand for any metal it will be seen to be marked with great quietude, and without promise of any immediate improvement; that is to say, if such an idea can be gathered from the fact of there being a manifest diminution in the enquiries in the market. It is a good sign when enquiries are numerous, even if they are only at impracticable limits, as it bids well for the future of the trade; but when at a time like the present, when there are only very few enquiries, the immediate future prospects cannot be regarded as altogether promising, because it gives every reason for believing that consumers and shippers have mostly purchased heretofore in sufficient quantities to fully meet present requirements, and perhaps to some extent anticipated coming events. It must, nevertheless, not be forgotten that in some of the leading metals there is a very considerable interest existing in the maintenance of the markets, and therefore it is but reasonable to expect that great efforts will be put forward to support prices. But how far such efforts will prove successful time alone can disclose, and it must remain to be seen whether operators who are desirous to uphold the market will be able to do so for any length of time in the face of slackness in regular trade, notwithstanding the several favourable features which they can bring to their aid, such for instance as cheap money and good agricultural prospects.

These are circumstances which, if they continue, may probably prove an ultimate stimulus to bona fide trade, but just now when buyers want appear fully satisfied they have but little effect except to be some means of preventing prices from falling away beyond a limited extent, and also in a degree they induce operators to effect purchases who possibly lay too much importance upon the bright side of the question, and frequently do not consider the adverse features in connection with the trade. Too much stress is also laid too often upon the prevailing feeling of the day, and hence it is not at all an infrequent occurrence to find amongst those operators who are buoyed up with hopefulness and sanguine expectations one day, possess gloomy views of the future on the next, and this, too, often without any alteration in the actual state of the trade, when the same influences are at work both for and against the markets, and when no new feature has arisen to justify any change. It simply arises from operators generally following the lead of the market, and some of the principal movers, who often appear to have the control of the markets, irrespective of what may be doing for legitimate trade.

COPPER.—A moderate business has been doing in this metal, and at the early part of the week prices of Chili bars advanced to some slight extent, and afterwards have remained tolerably steady at the improved rates. The immediate future of this market appears to be attended with considerable uncertainty. There can be no doubt that about the greatest support to the market at the present time is the previously reported good deliveries for the first half of the present month, but, at the same time, although large quantities are said to have been taken out of figures, yet this does not follow that it is gone to meet the current requirements of the trade. In fact, such a conclusion is quite contrary to other facts, such, for instance, as extreme quietude in the legitimate demand. Consumers and smelters may have bought in anticipation of future wants, or perhaps from an expectation of the sudden rise which has recently taken place. They may have observed that a speculative feeling was smouldering, and therefore concluded that prices might sharply advance, but at the same time from whatever cause the good deliveries are to be attributed, it is not reasonable to expect that they will continue so long, as the wants of the trade must have been greatly replenished, and this being the case the higher prices now ruling are not likely

to be very readily paid, and here it may be well to state that since the rise first took place there has been a marked falling off in orders, this being particularly noticeable in the shipping trade, and there does not appear any sign of orders increasing. It consequently seems somewhat doubtful whether operators will be able for long to uphold the market, as lower prices seem almost absolutely necessary to again stimulate the regular demand.

IRON.—The manufactured trade remains extremely quiet, and business is most difficult to effect. Sellers at times appear to try to stimulate business by declaring their willingness to accept reduced rates, but this does not have the desired effect, and buyers merely assume from the weakness which is ever and anon to be observed, that it is merely a forerunner of still further reduced rates, and that therefore holding orders in abeyance, when practicable, is perhaps the best course to adopt. But be this as it may, the tendency of prices just now is downwards, and but little business is doing. The manufactured trade, therefore, is not in that sound and satisfactory condition that could be wished for, but upon turning to the Scotch market we find there an improved state of things, not so much on account of the prices that are being realised, for they are still very low, but owing to the business that is doing, the shipments being kept upon a very large scale, while the local consumption is reported as enormous, and it is very striking that these features have not as yet produced any particular favourable effect upon prices, for with so large a business doing it is thought in some quarters that dearer prices are warranted, notwithstanding the maintenance of supplies. Unquestionably the great stimulus to the trade at the present time is the prevalence of low prices, and this has greater influence than it otherwise would, owing to the small difference which now exists between Scotch and Middlesbrough iron, which is now only 4s., while at the beginning of the year the difference was 3s. and at the middle of February, 7s. 3d.

The difference in price has already made a marked impression upon the imports of Middlesbrough iron into Scotland, which by the following returns show a great decrease in the total this year compared with last. Not a very large business has to be recorded as having been transacted on the Glasgow warrant market. The opening price on Monday was 47s. 8d., from which it fell away to 47s. 4d., closing, however, slightly better, while on Tuesday the price fluctuated between 47s. 4½d. and 47s. 7d., and on Wednesday the market was steady at 47s. 3½d., which must be reckoned the closing quotation for the week, as the warrant market is closed from last Wednesday evening until next Tuesday morning. The shipments last week are reported as 12,122 tons, against 9532 tons for the same week of last year, or a decrease of 2590 tons, and which makes the total shipments now for the whole of this year 240,350 tons, against 199,892 tons for the same time of last year, and 233,056 tons for the similar period of 1880. There remain 109 furnaces in blast, and the public stock has increased by a further 866 tons, making a total now of 636,797 tons, against 635,931 tons a week ago.

The imports of Middlesbrough pig-iron into Grangemouth last week were 3810 tons, against 5495 tons for the same week of last year, or a decrease of 1685 tons, and which makes a total decrease for the whole of this year, compared with last, of 17,770 tons. There is not much business doing on the Middlesbrough market, sales having been rather difficult to effect, but at the same time a tolerably firm tone has prevailed, and what business has been done has been chiefly at 43s. to 43s. 1½d. for No. 3. Makers have resolved to continue their price at 43s. 6d. for No. 3, and some sales are reported at that rate, while warrants rule firm at 43s. 3½d. The public stock shows a further decrease of 2600 tons, now amounting to 136,821 tons, against 139,421 tons a week ago. Shipments are very fair, being estimated at 17,600 tons. The manufactured trade is still stiff, ship-plates ruling at 7s. 5s., bars and angles at 6s. 10s., and puddled bars at 8s. A somewhat better tone is reported on the Wolverhampton market, and increased sales of pigs are said to have been made, Derbyshire qualities ruling at 46s., and Northampton sorts at 1s. less, while Staffordshire part-mines are quoted at 47s. 6d. Some fair Australian orders are stated to have been received for sheets, which have become slightly stronger, doubling ruling at 6s. 10s., and lathens at 1s. more, while bars range chiefly between 6s. 5s. and 7s. 10s., according to brand. The advices from Birmingham tend to show that the trade there is in a similar condition, and although business all round keeps limited, yet prices are for the most part steady, and sellers especially of manufactured appear reluctant to make more than the most trifling concessions in prices. There is but very little alteration reported in the trade at Sheffield, a fair business being still done in sheets, rods, and wire, and also in some descriptions of railway material, but for other classes of iron the demand is rather quiet. The Welsh reports show that there is a moderate business doing, although complaints abound that the ruling prices are unremunerative. According to advices from America of the 19th inst., there is increased weakness in prices, and but little business doing, although current quotations are nominally without change. Prices for manufactured are also reported lower, not only in New York, but also in Philadelphia.

TIN.—There has not been a very large business doing in this metal, although several small parcels have changed hands at tolerably steady prices. There is a large quantity of tin said to be concentrated in the hands of some few of the leading operators, and this being so prices are regulated in a great measure by them, and their action will, probably, continue to guide prices during the future as it has done in the past. One thing in connection with this trade cannot well be disregarded at the present time, although its influence has, perhaps, a greater bearing upon the consumptive demand than the speculative, and that is the tolerably high prices that are ruling. It is a well known fact that the demand for tin is quiet, and that low prices are ruling; and it is to be feared that the present value of tin tends, at least to some extent, to check the make of tin-plates; and, although this may be favourable to the tin-plate trade, since better prices would more likely be realised, yet it must have a detrimental influence upon the consumption of tin for the time being.

SPKLTEN.—The market has been fairly steady at 17s. to 17s. 5s. for ordinaries and 17s. 6d. to 17s. 10s. for specials.

LEAD is also steadier at 14s. 2s. 6d. to 14s. 5s. for Spanish, and 14s. 5s. to 14s. 10s. for English.

STEEL remains featureless, a limited business doing in rails.

TINPLATES keep very dull, and prices easy, but without any great change.

QUICKSILVER remains steady at 6s. in first hands, with a fair export demand.

In the MINING SHARE MARKET the dealers have been chiefly occupied in the settlement of the usual fortnightly account; but a fair amount of business has also been transacted in a few prominent mines, for which an improved demand has existed. Those mostly dealt in have been Carn Brea, Tincroft, Parys Copper, West Kitty, Wheal Crebor, West Crebor, Killifreth, Wheal Bassett, West Caradon, Phoenix, New Cook's Kitchen, East Blue Hills, and a few others.

TIN has been firmer in the metal markets; but no advance has been made by the smelters this week in the standard for ore. Rather more business has been done in tin shares, chiefly in Bassett, Tincroft, and Carn Brea. Blue Hills, 3 to 1; this mine has improved. Carn Brea, 14 to 16; Cook's Kitchen, 37 to 39; Dolcoath, 69 to 71; East Blue Hills, 10s. to 12s. 6d.; East Lovell, 1½ to 2; East Pevor, 52 to 54; Killifreth, 5½ to 5½; Drawkalls, 3 to 3½; Kit Hill, 2½ to 2½; North Penstruthal, 3 to 3½; Phoenix, 2½ to 2½; South Condor, 8 to 8½; South Frances, 11 to 12; Tincroft, 14½ to 15½; Wheal Bassett, 11 to 12; West Frances, 9½ to 10½; Wheal Pevor, 11 to 12; Wheal Agar, 15 to 16; Wheal Grenville, 10 to 10½; Wheal Kitty (St. Agnes), 1 to 1½; Wheal Pevor, 10 to 11; Wheal Jane, 1 to 1½; Wheal Jewell, 1 to 1½; Wheal Uny, 2½ to 2½.

Wheal Owles, 10 to 10½. At the meeting the accounts showed a balance against the adventurers of 5501s. The tin sold—83 tons 5 cwt.—realised 5451s. The costs were 3984s. for five months' working. The company have still a large stock of tin on hand. West Kitty, 8½ to 8½. The 80 east has greatly improved, and is now worth 20s. per fathom. The 72 east worth 10s.; 60 east, 15s.; rise in back of 60 east, 25s. per fathom. New Kitty, 2 to 2½. In the 24 west there is an improvement reported. Trevaunance, 2½ to 2½; they expect soon to cut the Wheal Friendly lode. Wheal Coates, 15s. to 20s. At the meeting the accounts showed an expenditure for four months of 2347s. 13s. 4d. The receipts, call made January 20, 2s. per share, 1200s. Tin sold—35 tons 18 cwt.—2320s. 9s.; balance at bank, 1138s. 16s. 10d. The mine is on the Cost-book System, and to the accounts a note is appended, as follows: "Under the contract by which the company purchased this property, 3000s. will have to be paid to the vendors out of first profits before any dividend can be declared, which will be total amount for the mine, plant, &c." The agent's report states there are 11 tribute pitches worked by 46 men and boys, varying from 12s. 6d. to 13s. 4d. in 12, and 34 men on tutwork driving levels, and, "provided we get a fair price for tin, viz., 60s. per ton, and a little better quality tin stuff, with only an additional 6 or 7 lbs. of tin per ton of stuff, we could make fair profits, which would bring us into the Dividend List." Wheal Bassett, 8½ to 8½. Lode for 4 fms. seen is said to be worth 60s. to 80s. per fathom. Tregembo, 3 to 3½; Goodever, 1 to 1½. The first sale of tin will soon be made. New Trumpet, 1 to 1½; Polrose, 1 to 1½; West Phoenix, 17s. 6d. to 20s.; West Poldeice, 5 to 5½; Lovell, 1 to 1½.

COPPER has continued firm, and a good business has been transacted in several copper mines at improved rates. Bedford United, 1½ to 2; the accounts for the meeting next week show a loss on the half-year ending April 30 of 1276s. 5s., and a balance at the bankers of 137s. 18s. 4d. Due on calls, 357s. 13s. The mine costs for six months amounted to 1533s. 3s. 6d.; merchants' bills, 713s. 16s.; the sales of copper ores, 269s. 1s. 6d.; mundic, 61s. 13s.; received on account of sixth, seventh, and eighth calls, 2024s. 0s. 6d., making 12s. per share paid-up on the 12,000 shares of 1s. each, less 147s. 10s. 6d. shares. Carnarvon Copper, 1 to 1½; Devon Great Consols, 7 to 7½; Devon Great United, 1 to 1½; South Devon, 12s. 6d. to 17s. 6d.; East Caradon, 1 to 1½; Gawton, 9s. to 11s.; Gunnislake (Clitters), 2½ to 2½;

Marke Valley, 7s. 6d. to 12s. 6d.; Mellanear, 4 to 4½. Wheal Crebor, 2½ to 3½; No. 2 winze, sinking below the 120, is valued at 40l. per fathom. The total points in operation are valued in the aggregate at 180l. per fathom.

West Crebor have been largely dealt in up to 16s., and leave off 11s. to 13s. The lode in the shaft is worth 15l. per fathom, and of a most promising character. Parys Copper, 10s. to 15s. The lode in back of 90 west has improved to 3½ tons per fathom. The 90 east is driving to get under the "great bottoms." Morfa Du, 4 to 4½. The lode in Ida shaft had considerably improved, and is worth 3 tons of good copper ore and 3 tons of bluestone per fathom; this latter solid and of good quality. Mona, 4 to 5; Mona Consols, 1½ to 1¾; New Cook's Kitchen, 6½ to 7½; Prince of Wales, 9s. to 11s.; South Caradon, 15 to 20; West Caradon, 7s. 6d. to 10s.; West Devon, 7s. to 9s.; West Seton, 37 to 39; Devon Friendship, 5s. to 7s.; the places underground, it is said, are so full of broken ore that the hands working the ore ground have been lessened till the new winding engine and the second calciner are at work. Stridridge, 6s. to 7s. The stope in 30 east is worth 12l. per fathom. New West Caradon, 4 to 4½.

LEAD continues without change. Shares in lead mines are very quiet, and with mere nominal quotations. Vans are quoted 5½ to 5¾; Great Laxey, 17 to 18. Roman Gravel, 9 to 9½ ex div. of 5s. per share. Tankerville Consols, 4s. to 6s. East Roman Gravel, 15s. 6d. to 17s. 6d.; the mine continues to look well. South Darren, 3 to 1½; Bwlch, 3 to 4; Coed-y-Fedw, 1 to 1½; D'Eresby Mountain, 1 to 1½; Frongoch, 2 to 3; this mine has sampled 150 tons of blende. Goginan, 3 to 1½. Grogwinion, 1 to 2; the sale this week (50 tons) realised 9l. 3s. 6d. per ton. North Grogwinion, 1 to 1½; Ystwith, 4 to 5. East Chiverton, 1½ to 2; another parcel of 50 tons of lead ore will be sampled shortly. Goddard's Lead, 1 to 1½; Leadhills, 2½ to 2¾; Pennant, 4½ to 5; Pen-y-Orsedd, 10s. to 20s.; Sinclair, 1 to 1½; Van Consols and Glyn, 3 to 4; West Holway, 1 to 1½; West Lisborne, 1 to 1½; Gwynmynydd, 1 to 1½.

FOREIGN MINES.—Akanook, 4 to 5; business at 4. Alamillos, 1½ to 1¾; Anglo-African Diamond, 7½ to 8; Broadway, 3½ to 4; Canadian Copper, 1½ to 1¾; Chili, 4 to 4½; Colar, 3 to 4; business at 3. Copiapo, 3½ to 3¾; Devala Moya, 4 to 4½; business at 1 11-16 and 1. Devala Central, 3 to 4; Don Pedro, 3-16 to 5-16; business firmer. Fortuna, 4 to 4½; Indian Consolidated, 1 to 1½; business at 1. Indian Glenrock, 3 to 4; business at 1. Indian Phoenix, 1½ to 1¾; business at 1 3-16. Indian Trevelyan, 1 to 1½; business at 1 11-16 and 9-16. Kapanga Gold, 3 to 4; business at 9-16. Kimberley, 5 to 6; La Plata, 1½ to 2½ ex div.; the directors at their meeting in New York yesterday declared the usual monthly dividend at the rate of 12 per cent. per annum; it will be payable in London on June 1. Linares, 4½ to 4¾. Mysore, 4 to 4½; business at 11-16. Panulillo, 6½ to 6¾; business at former. Potosi, 1½ to 2; business at 11-16 and 9-16. Rhodes Reef, 4 to 5; business at former. Richmond, 7½ to 8; the directors' report, to be presented at the meeting on Thursday, will be found in another column. South-East Wynaad, 2 to 2½; business at 2 7-16, 9-16, 2½, and 2 5-16. Tharsis, 4½ to 4¾; Tocopilla, 4 to 5. Wentworth Gold, 4 to 4½; business at 2. Wynaad Perseverance, 3 to 4.

Almada, 11s. 3d. to 13s. 9d.; Bratsberg, 1½ to 1¾; Birdseye, 1½ to 1¾; Cape Copper, 50 to 52; Eberhardt, 4 to 5; Frontino, 2½ to 2¾; New Quebrada, 4½ to 4¾; Ruby, 2½ to 3; Gold Hill, 1 to 1½; Brazilian, 1 to 1½; Colorado, 1½ to 1¾; Colombian, 9s. to 11s.; Corporation of South Australia, 1 to 1½; New Emma, 1½ to 2; Michipicoten, 1 to 1½; St. John del Rey, 170 to 180; Tolima, 2½ to 3; Tambacherry, 3 to 4; Placerville, 1 to 1½; Yuba, par to 1 prem.

The Market for Mine Shares on the Stock Exchange, although to some extent affected by the Derby, the Oaks, and the settlement, closes quite as favourably as last week. Business has been much restricted, but prices have been well maintained, and in many cases an advance has been established. This is especially observable in the Indian mine shares, which have been in greater favour than for some weeks past. Devala Moya are 4 better; Indian Consolidated, 1-16th; Indian Glenrock, 4; Indian Phoenix fully 3, the rise being from 3, 1, to 1 3-16ths to 1 5-16ths; Indian Trevelyan are 4 better; South-East Wynaad about 3, the present quotation being 2½ to 2¾. In American concerns La Plata are quoted 1½ to 2½ ex div., at the rate of 12 per cent. per annum, the directors in New York having yesterday set aside the usual (the 3rd consecutive) monthly sum of \$22,000 to pay it with. The warrants will be payable on June 1. Yuba River appears to have made a very rapid jump, being now quoted as much as 1 prem. The improvements and prospects upon which the advance has taken place were noticed last week. Good news has also been received with regard to another American mine. The Evening Star of Leadville, was organised in 1880 with a capital of \$50,000 in 50,000 shares, of \$10 each. The entire capital was returned the first year. Since the beginning of the present year 18 dividends, amounting to \$450,000 have been paid, and the total dividend paid to date amounts to \$1,075,000. The mine produces gold, silver, and lead.

The appeal of the Great Southern Mysore Gold Mining Company in Gibbs against the company, has been dismissed with costs. It will be interesting to know whether this relieves those who hold shares not fully paid from the necessity. It can scarcely be supposed that a court of law would compel victims to pay up a balance because they have been induced by falsehood to make a first payment. It will be remembered that by the prospectus it was stated, among other things, a sum of \$250,000 had been deposited to guarantee a first year's dividend of 7 per cent.; that the price to be paid for the mining rights, which the company was formed to purchase, was \$5,000, payable as to \$2,000 in cash, and \$3,000 in shares; all preliminary expenses had been provided for under the agreement for purchase. Then it referred to an agreement made between certain vendors, one Henry Dyer and a trustee for the company, and stated the usual way that it might be seen at the company's office. The real purport of this agreement was that the \$3,000, should go to Dyer, who should promote the company and pay the expenses, and also find the guarantee fund, until after the first allotment of shares, when it should be returned to him. Their lordships unanimously dismissed the appeal with costs, holding that the prospectus did not truly state the purport of the agreement, since from the latter document it was clear that the supposed guarantee fund was in reality provided from the money paid by applicants for shares, and the remainder of the \$3,000, was nothing but promotion money.

Our usual telegram from Cornwall this evening states:—During the past week the Cornish mine share market has been rather dull, but with a slightly improved tone in tin in the London markets prices in shares have been fairly maintained. There is generally a hopeful feeling that prices will shortly improve, and some of the mines are rather shy in offering their produce. Dealings have been principally confined to a few mines. Wheal Bassett shows a further advance. The important improvement reported by special circular looking very favourable, and sellers are scarce. Killifreth maintain their price fairly. New Cook's Kitchen have been in demand, whilst North Busby shares are in request owing to improved prospects. Carn Brea, 14 to 14½; Cook's Kitchen, 37 to 38; Dolcoath, 70 to 70½; East Pool, 53½ to 53¾; Killifreth, 5½ to 5¾; New Cook's Kitchen, 6½ to 7; North Busby, 4 to 4½; Pedn-an-drea, 3½ to 4; Crofty, 10 to 10½; South Frances, 11½ to 11¾; Tincroft, 14½ to 14¾; West Bassett, 11 to 11½; West Frances, 10 to 10½; West Peavor, 12 to 13; West Seton, 37 to 38; Wheal Agar, 14½ to 15; Wheal Bassett, 8 to 8½; Wheal Peavor, 10 to 10½.

Electric light shares have shown further retrogression during the past week, and the decision of the Select Committee of the House of Commons has well nigh extinguished the hopes of those who anticipated creating a system of huge monopolies. The nominal capital of the electric lighting companies now before the public reaches very nearly 14,000,000l., and the purchase money demanded is almost exactly 2,700,000l. Excepting a few of the earlier concerns, the promoters have been seriously disappointed in obtaining money from the public, and although probably all will proceed to allotment to save the pockets of the directors and agents the assertions that the capital has been over subscribed cannot in any case be verified if the names of the syndicates be excluded. Three-fourths of electric light paper now nominally on the market does not even command a nominal quotation amongst dealers, and with, perhaps, three or four exceptions the nominal premiums quoted are absolutely unobtainable by the public—that is to say, they are merely vendors' quotations, made in the hope of inducing the uninitiated to buy at par. With regard to the patents owned by the several companies, the Brush Company has offered to indemnify its clients against Gramme's claims for infringements. That all the dynamos are but colourable imitations, modifications, or improvements on the Gramme machine is beyond question; but, then, the Gramme stands in precisely the same position with regard to the dynamo of William Ladd exhibited at the Paris Exhibition in 1867. It is unnecessary to prove whether Mr. Ladd, now a prominent director of the Brush

Company, was the originator, because any thing invented and patented in 1867 is now public property. To Mr. Ladd is due the honour of having constructed a dynamo machine which renders absolutely worthless every patent owned by the electric light companies now in existence, including those of which Mr. Ladd is a director. That commercially valuable patents might have been secured is true, but those patents could only have been for improvements in details, to securing which not one of the patentees gave any attention. Disclaimers may be showered in upon the Commissioners of Patents as thickly as the patentees please, and some disclaimers have already been lodged, but the errors can never be corrected, so that, thanks to Mr. Ladd, anyone can make and use any machine, although it may be an exact copy of any one now in the market, without fear of patent claims. The Parliamentary Committee has determined to recommend the House that the clauses asking for powers to supply the electric light shall be struck out of all private bills of the session, and to recommend the adoption of a public bill dealing with the whole system of public lighting on the basis of the Board of Trade suggestions. The closing quotations for shares of this class were—Brush (4l. paid), 20 to 21; ditto (10l. paid), 48 to 50; Hammonds, 9 to 11; Eastern Electric, 1½ to 2 prem.; Midland, 4 to 5 prem.; Pilsen, 4 to 1 prem.

Devon Great Consols, 7½ to 7¾; the half-yearly meeting of shareholders, held on Thursday, was well attended. Great expectations are anticipated from the development of the new ground on the south lode, called Watson's, from which some fine specimens of ore were produced by the agents at the meeting. Particulars of the meeting will be found in another column.

Kit Hill Great Consols, 12s. 6d. to 17s. 6d.; the meeting of shareholders was held on Thursday, and was well attended. The proceedings of the meeting will be seen in another column.

Devon Great United, 12s. 6d. to 17s. 6d.; in another column will be found the proceedings of the meeting of shareholders held on Thursday. Some good ore has been met with in the 60 westward of a promising character, indicating the near approach of some good ore ground.

Botallack shares quoted at 5½ to 6½, and in demand owing to a good discovery, and are likely to advance in price.

South Wheal Frances advanced to 11½, 12; the mine looking well throughout. A large outlay will be required to put the various machinery in order, as described at the late meeting of shareholders.

West Wheal Seton shares have been increased to 2400, and are now quoted at about 18 to 20, the general feeling toward them being favourable, owing to the splendid discoveries of rich tin ground now being discovered in sinking the shaft, likewise in driving the bottom levels east and west.

Drake Walls, 12s. 6d. to 15s.; the report will be seen in another column. A good sale of tin is expected next week.

It will be interesting to those connected with mines in the Gongo Soco district of Brazil to learn that rich ore has been struck in the main shaft of the Bonzes Mine. An average parcel of 100 tons yielded by the common mill process 5l. 6s. per ton, and 10 tons selected first class gave 16l. 10s. per ton. Well may it be asked—Can India do better? The vein is widening, and in depth maintains its richness. Further details are expected by next mail.

A valuable silver mine near Trebizond, conceded by the Sultan to Kimil and Osman Pasha (the sons of Mustapha Pasha, and cousins of the present Khedive of Egypt), is at present being worked by a small company, with a view to prove that it is worthy the attention of European capitalists. In the silver a small proportion of gold is found, which would, it is said, pay well for extracting.

Richmond 7½ to 8½; the usual telegram from the mines states that the week's run was \$24,000, from 455 tons of ore, with one furnace. During the week the refinery produced doré bars to the value of \$20,000. The superintendent's report (May 1) states that the 300 west drift, over No. 11 chamber, has been run 9 ft. in favourable limestone—following fissure, resumed 24th for purpose of exploring country east of No. 16 chamber. The 700 north drift from west drift at quartzite contact (Burleigh drill) has been run 18 ft. in limestone, no change. (Very hard, and favour, able.) The 700 west drift from station (Burleigh drill) has been run 19 ft. in crushed and sandy limestone. The 700 north drift from winze under 13 chute has been run 14 ft. in hard light limestone. Operations in the two 1220 drifts have been suspended because of an excess of water on this level. The report of the directors for the forthcoming meeting will be found in another column.

Ruby and Dunderberg, old shares, 2½ to 3; new shares, 1½ to 2 prem.; the weekly report advises considerable progress in the drifts, owing to the ground still continuing favourable. The No. 8 ore body above the 700 ft. level was improving again both in quantity and quality. Below this level there was not much change, except that there were decided indications of another cave. Work was about to be commenced again both in the Bullwhacker and Lord Byron Mines. In the usual telegram news has been received that shipments from the mines have recommenced, 233 tons having been sent down from the Dunderberg Mine to the Richmond furnaces to be smelted during the week.

The Eberhardt Company have determined in consideration of an "important change in the aspect of the company's prospects and its financial condition," to make a call of 2s. per share. The general meeting will be held on Tuesday.

Organo Gold, 4 to 4½; a satisfactory report has been received to-day from the superintendent at the mines, which states (March 20) that Rogers is now driven 22 fms. from mouth, ground very hard. The lode maintains bearing and underlie, and is mainly same character as last reported, but here and there the limestone gave place to quartz, and in the sticking next the footwall he saw small specks of gold. In a private letter to the secretary he says—I value the lode in No. 1 winze as worth 150l. per fathom.

In Lead Mine Shares a somewhat better feeling has been manifested, and British miners naturally anticipate very favourable results from the operation of the Spanish-French treaty which will shortly come into force. Under it the Spanish export duty on lead to Great Britain will be considerably higher than the corresponding duty to France, and it is hoped that this will have the effect of checking the flooding of the British markets with Spanish metal, and thus lead to an improved price for lead in this country. Of this lead miners will quickly feel the advantage, as they will obtain a better price for their ores, and many mines which are now barely able to meet expenditure will be in a position to show good profits. Roman Gravel, 9½ to 9¾, and in demand. The 200 tons of lead ore sold this week realised 1873l. 15s. Tankerville, 4 to 4½; as will be seen by the report of the manager some good results are shortly expected at Potter's pit part of the mines.

The Philadelphia and Reading Railroad having been subjected to adverse rumours during the week, Mr. William Abbott, of Tokenhouse-yard, has written to the president of the company (now in London) enquiring "whether there is any truth in the rumour which has been industriously circulated during the last few days that a strike of miners has taken place in the State of Pennsylvania, which will have a very serious effect on the property. Also whether anything has happened to justify the fall in the quotation for the Deferred Income Bonds, about which also adverse rumours had prevailed."

The president—Mr. F. R. Gowen—in reply, says:—"The net earnings are fully up to my expectations. The gain for five months is \$383,486, of which \$128,253 was made in April. I expect an increase of \$1,000,000 in the year, or net earnings of \$1,100,000, against \$1,051,888 last year, and see no reason to doubt the correctness of the prediction I made at the Cannon-street meeting on April 23, that by July 1 the company will be prepared to resume full payment on all of its obligations, and to terminate the receivership."

"The threatened strike in the iron districts of Pennsylvania is in the coke and not the anthracite region. I have no knowledge of it, except what I gather from the newspapers, and while I do not give much credence to the report, I can say that if the rumour is well founded, the Reading Railroad Company, which supplies the anthracite iron district, would be as great a gainer from the stoppage of the coke iron manufacture as the British ironmasters would be if a strike prevented the production of iron in Belgium."

"Mr. Vanderbilt informed me yesterday that the new line he is constructing to connect the New York Central and the Reading systems will be completed next December. Mr. Garrett, of the Baltimore and Ohio Railroad Company, designs connecting his system with our own, and has only been waiting the termination of the legal contest about the control of the Central Railroad of New Jersey, which was decided on Monday last by a decree of the Chancellor of New Jersey in our favour. The new line from Harrisburg to Pittsburg, a part of which is now under construction, may be expected to be finished within two years. I estimate the increase of net earnings from these new avenues of traffic to be equal to 5 per cent. upon the share capital of the company; but, irrespective of these new sources of revenue, I confidently expect the company to earn a dividend upon its common shares this year, and a further dividend upon the deferred income bonds in 1883."

The letter received from the Foreign Office by the Secretary of the Varna Railway Company has been circulated by Mr. William Abbott, of Tokenhouse-yard. Sir Charles W. Dilke writes: "That Her

Majesty's Government are awaiting the official answer to the communication which, as you were informed in my letter of April 13, Mr. Lascelles was instructed to make to the Bulgarian Government, as to inviting the Signatory Powers to authorise their Ambassadors at Constantinople to act as arbitrators between that Government and the company, and Mr. Lascelles has been again instructed to press for an immediate reply to his note. It will be seen, therefore, that Lord Granville has anticipated the wishes of the company, as stated in the resolution enclosed in your letter, and his lordship is of opinion that the interview for which you ask can serve no useful purpose."

The General Life and Fire Assurance Company held its meeting to-day, when it was reported that 1540 life policies had been issued during the past year, assuring 548,360l., and yielding 18,090l. in new annual premiums, and 621l. in single premiums. The claims by death were comparatively light, amounting in all to 51,626l., arising under 170 policies upon 184 lives. In the fire department the gross premiums 74,861l., being an increase of 5438l. over those of 1880, and the losses were 40,446l. The total income from all sources was 234,487l. The Life Reserve Fund was increased to 687,440l. The assets on Dec. 31 were 793,386l. 4s. 6d. The average interest realised was at the rate of 4l. 8s. 8d. per cent. per annum. A dividend at the rate of 8 per cent. for the year was declared.

GAS SHARES.—The principal business in these shares, according to this evening's report of Messrs. W. L. Webb and Co., of the Stock Exchange and Finch-lane, has been—Alliance Dublin Consumers, max., 10 p.c. 14½; British, 3½; Bombay, 5½; Commercial, 18½ to 187; Continental Union, 25 to 28; European Navy, 3; ditto (Limited), 19; Gas Light and Coke, A (ordinary), 170 to 171½; ditto, C, 10 per cent. pref., 212½ to 214½; ditto, B, 7 per cent. max., 126 to 127½; ditto 4 per cent. deb. stock, 103½ to 104; Imperial Continental, 182½ to 184½; Monte Video, 14½ to 13½; South Metropolitan, B, 172½ to 173. Gas stocks firmer.

INSURANCE SHARES have, according to this evening's report of Messrs. W. L. Webb and Co., of the Stock Exchange and Finch-lane, been dealt in as follows:—Alliance British and Foreign, 36½ to 36¾; City of London Fire (Limited), 11½ to 11¾; Commercial Union, 21½; Eagle, 6½; Employers' Liability Assurance Corporation (Limited), 3½ to 3¾; Guardian, 72; Fire Insurance Association 3½ to 3¾; Imperial Fire, 148½ to 149½; ditto Life, 22½; Indemnity Marine, 18½ to 18¾; London and Provincial Fire (Limited), 7½ to 7¾; Marine (Limited), 23½; Merchants' Marine, 2 to 2½; Ocean Marine (Limited), 8; Phoenix, 300 to 301½; Railway Passengers, 7½; Standard Fire, 13½; Universal Marine, 7¾. Insurances steady, except Alliance.

TRAMWAYS.—The closing prices of this evening, as quoted by Mr. W. Abbott, of Tokenhouse-yard, are given in tabular form in the last page of the Journal.

RAILWAY AND GENERAL MARKETS.—Referring to the course of business done to-day during official hours (11 to 3 Mr. Ferdinand N. Kirk, Birch-lane, writes:—Opening: There is still a strong desire shown to get out of electric shares, though, in the majority of instances, accounts can only now be closed at a loss. Brush (4l. paid) are quoted 20½. Hammonds being 10½ to 10¾. On Western and some of the other electric light companies the premium has all but disappeared. Unified strong, at 71½; Brighton, A, are 142½; at one time yesterday the stock was sold down to 141½. Wheal Orebers are nominally 2½ to 3½, with next to nothing doing. After being in demand at 14s. early in the week, West Crebors have relaxed 10s. to 12s.; Readings, 28½ to 28¾; Penns., 58½ to 58¾; Richmond, 7½ to 8; New Quebrada, 4½ to 4¾; Panulillo, 6½ to 8½; Potosi, 2½ to 3½. Closing: The settlement is now concluded, and in view of the approaching holidays not much fresh business will be done until Tuesday or Wednesday. Beyond an advance to 145 in Great Western, railways are almost featureless. Brightons are only 142 to 142½, and Unified 71½. Brush Lights are quoted 21 to 21½, Hammonds being 11 to 11½. Trunk Ordinary and Third Preference are slightly higher.

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75 Camborne Vein. 25 Kingston Down. 100 Tankerville.
10 Carn Brea. 20 Killifreth. 10 Tincroft.
5 Cook's Kitchen. 50 Kit Hill. 20 Tin Hill.
200 Ootacovil. 30 Langford. 10 West Bassett.
100 Coates. 100 Morfa Du. 10 West Frances.
10 Devon Consols. 100 Mounts Bay. 20 West Kitty.
10 Devon Friendship. 200 Mysore Reef. 35 West Devon.
10 D'Eresby Mountain. 25 New Kitty. 20 West Peavor.
10 Dolcoath. 50 North Busby. 20 West Polbreten.
30 Drakewells. 100 Norway Copper. 5 West Seton.
55 East Blue Hills. 50 Old Shepherds. 5 Wheal Agar.
50 East Buller. 500 Old Owacombe. 15 Wheal Bassett.
30 East Chiverton. 100 Parys Copper. 10 Wheal Grenville.
10 East Pool. 100 Penhalls. 25 Wheal Jane.
100 East Roman Gravel. 50 Phoenix United. 10 Wheal Kitty (St.
100 East Wheal Rose. 4 South Caradon. Agnes).
50 Eberhardt. 23 South Condurrow. 50 Wheal Uny.
20 Frongoch. 100 South Crebor. 25 Wheal Crebor.
50 Gwanton. 10 South Crofty. 150 Wheal Sisters.

The present is a favourable opportunity to purchase low priced shares, and I
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TO INVESTORS.

The RICO SILVER MINING COMPANY OF COLORADO (Limited Liability), in order to provide funds for the further development of its mines, offers part of its working capital for sale.

The shares are 10 dollars each par value, fully paid, and there is no further liability of any kind on them; the present selling price is 10s. per share, in lots of not less than 100 shares. 13,600 shares have been issued, which are held principally in London, Manchester, and Chicago, and 11,400 shares remain unsold available for working capital.

The Rico district is but three years old, yet it possesses some of the richest gold with silver producing mines in America—for example, the Sinbad Mine is taking out quartz from which a fair sample of first grade ore, assayed by F. Claudet, Assayer to the Bank of England, yielded 84 ozs. gold and 1676 ozs. silver per ton; the second grade ore assayed at Rico, 5 ozs. gold and 210 ozs. silver per ton; the third grade ore assayed 2 ozs. gold and 63 ozs. silver per ton.

The Rico Silver Mining Company is engaged in a carefully managed business-like mining enterprise, which affords an exceptionally favourable opportunity for the realisation of very large dividends. It is not an undertaking organised merely for the purpose of making promoters' profits.

The President of the company is at present in England, and will take great pleasure in sending to investors the "Annual Statement of the Rico Silver Mining Company of Colorado," which affords full information concerning the company's property and purposes, as well as about the Rico district generally. This statement merits favourable consideration from all who think that mining for gold and silver ought to be a most profitable pursuit when judiciously entered into and carried on with skill and economy.

Address, J. J. WEST, care of L. D. Drake, Esq., 21, Abchurch-lane, E.C., London.

Notices to Correspondents

VALUATION OF MINES.—The writer of the letters on this subject, signed "Mining and Civil Engineer," complains that he has three times sent the number 124886, and that each time it has been incorrectly printed, first 24886, and then 124886. It is needless to state that he is in error in attributing the error to personal feeling against him on the part of the compositor or reader, since it is known to almost everyone that in a newspaper office it is impossible to verify correspondents' calculations, and that everyone employed endeavours mechanically to reproduce the contents of each writer's manuscript. The errors complained of prove the necessity of avoiding in a newspaper figures and calculations which are only suited for a scientific book.

ELECTRIC ILLUMINATION.—"Enquirer" (Manchester).—We have seen no experiments with the Fyfe-Main light, nor can any special superiority be observed in the lamps described as being on that system at the Crystal Palace. Most of the lamps burn well because they have all ample current, and are well looked after. The Royatt and Fyfe Company's light was exhibited at the Wimbledon meeting in 1881, and was fully referred to in the *Mining Journal* of July 23. The Pilsen and Joel lamps with Schuckert's dynamo were used, and the Fyfe-Main is said to be a modification of the lamps used at Wimbledon by the company mentioned. It is exceedingly questionable whether any one of the patents owned by the companies now before the public—the Jabloch-koff perhaps excepted—could pass through the ordeal of a trial in a Court of Law. It has even been said that the Guichet system, which is the best and most novel at present in use, is in a dubious position, owing to the publication before securing the patents in this country; the Guichet Company are fully confident that their patents are valid, in which case they have a great future before them.

NEW METALLURGICAL PROCESS.—Can any correspondent oblige me, through the *Journal*, with information as to the recent improved methods for the separation of lead, silver, blende, and munda. I am interested in a property where large quantities of these ores exist; all attempts to dress them by water show such a serious loss in lead and silver that I am desirous to change the whole method of treatment, and should be glad if I can be put in the proper channel to make the necessary investigations.—PROGRESS.

TASMANIAN LETTER.—"J. W. N. S." (Burnies).—We have sent your letter to Chas Thomas, F.G.S., but it was not for him. The Geological Society also return it, there being no other Fellow of the same name. The letter is an acknowledgment for money, and the party it is intended for can have it upon applying at the *Mining Journal* Office, and giving name of writer, with above initials and amount remitted.

TIN AT DOLOMOUTH.—I should be obliged if some reader would inform me in next week's *Journal* at what depth tin was met with in the Dolomouth Mine.—O. P. Received—"C. S. R." (Alma)—"D. M." (Glasgow)—"Shareholder" (Olahe—"C. L." (Cheltenham)—"P."—"H. L." (Indian Trevelyan)—"B. S." (Pyemouth). Next week—"J. R. B."—"Ruby Hill." Next week—"T. R."—"A. P."—"Shareholder" (Mona)—"E. B." (Frontino and Bolivia)—"Observer" (Metropolitan District Railway)—"Shareholder" (Devon Great Consols)—"F. G. S." (York)—"An Old Miner" (Minsterley)—"A Friend to Ireland" (Connemara)—"R. W. B."—"A Thankful Reader" (Bewdley)—"Shareholder" (Hington Down)—"M. P." We will endeavour to ascertain the particulars for next week's *Journal*.

THE MINING JOURNAL,
Railway and Commercial Gazette.

LONDON, MAY 27, 1882.

THE EMPLOYERS' LIABILITY ACT.

Among the many Acts of Parliament which chafe and irritate large employers of labour and colliery proprietors there are few more annoying than the Employers' Liability Act. Not only has it imposed heavy penalties for injuries which may be sustained under questionable responsibility, but it opens a wide door for litigation on the part of the gentlemen of the long robe, whose interest it is to promote and encourage an appeal to law. The Act in question was undoubtedly passed mainly in the interest of the working man, heavy claims and damages being imposed where no such responsibility previously existed. But the Act itself had its defects, and it soon became evident that the proverbial "carriage and pair" could be easily driven through some of its provisions. The Act must be read in connection with the previously passed Factory Act, which imposed heavy penalties upon employers in the event of their not efficiently fencing or having defective machinery, rendering owners liable to pecuniary compensation for any accidents which happened in their works, leaving, in its practical application, little regard to carelessness or recklessness on the part of the workmen themselves. Mr. ALEXANDER REDGRAVE, the chief Inspector under the Factory Act, states in his last report—that for the year 1881—that the Act had assisted him in administering that part of the Factory Act which required that machinery should be securely fenced, and that employers were more ready to do so than formerly; but Mr. Inspector McLEOD complains that one great evil has been called forth by the Act—"The manufacture of cases for the benefit of attorneys;" and he justly remarks that employers formerly found it a matter of sound policy to give compensation in cases of accident to workmen, but now when they find legal proceedings are instituted against them they decline to adopt any measure of relief which might seem to induce a conviction on their part of culpability. And Mr. Inspector McLEOD is undoubtedly right in his interpretation of the Act. Scores of instances may be cited in which large employers of labour willingly recognise the claims of disabled workmen in their employ, freely contributing to their support, and that of their wives and families, responsibilities which they decline to accept under the threat of legal liability.

When the difficulties of the practical working of the Employers' Liability Act began to manifest themselves (and that was very shortly after it became law), and when its pains and penalties became grievous to be borne, the employers naturally endeavoured by united action to protect each others interests. Some of the employers of labour, as obviously the London and North Western Railway Company, the Great Eastern Railway Company, and others, impose upon all their men "conditions of employment," the object being to make the heavy pecuniary compensation clauses of the Act inoperative. A mutual insurance fund was established to which employer and employed contribute in certain fixed proportions, and it is out of this fund and not through the claim which the Act empowers the men to make, that compensation is to be made. One would think that when both sides, the employer and the employed, solemnly agree to conditions such as these for mutual protection, that no objection could possibly be taken. But the lawyers think otherwise, and already is the question raised whether it is permissible to set aside an Act of Parliament by a contract of the kind we have mentioned.

A most vexatious case was tried last week at Cardiff, before Judge HERBERT, in which a labourer, named T. BAKER, brought an action under the Employers' Liability Act, against the proprietors of the St. Columbia Steamship Company for the recovery of no less than 230% for damages alleged to have been sustained by the defective ventilation of the defendants' vessel. The facts of the case were perfectly clear, but the defendants had throughout repudiated their liability. The plaintiff was loading the port bunker of the vessel with coal, and the shoot through which the coal was being shot becoming blocked, the plaintiff brought a naked light to remove the obstruction. Before, however, he reached the door of the tank, a violent explosion occurred, he being blown a considerable distance and so injured that he was in the infirmary for seven weeks, and is still an out-door patient of that institution. The contention of the plaintiff's solicitor was that the proprietors of the vessel were liable, inasmuch as the holds were not efficiently ventilated. It was conclusively proved, however, for the defence that the vessel was properly ventilated, and that the explosion was caused by the plaintiff carrying a naked light to the shoot, where a closed lamp only should have been carried. His Honour held that the gas had not fired in the tank, but in the shoot, and that no provision was made for the ventilation of the shoot. He therefore gave a verdict for the defendants, who we may add had voluntarily offered the plaintiff 5% in sympathy for the injuries which his own act had unfortunately caused. We only cite this case as proving what we have previously said, that the provisions of this Employers' Liability Act opens the door for a good deal of irritating annoyance, and that employers often decline practical sympathy with sufferers in their employ when threatened by legal proceedings.

But even lawyers and some of the judges of the county courts do not agree in their interpretation of some of the principal clauses of the Act. The Judge of the Sheffield County Court has just decided that a contractor sued therein for compensation for personal injury to a workman is not liable, because the ways and machinery by means of which the injury had been brought about were not under his control, nor were the owning firm responsible because the injured man was not in their employ, but in that of the contractor. On the other hand Sir RUPERT KETTLE, undoubtedly a high authority, has just ruled, as Judge of the Worcester County Court, that an employer is liable to compensation claims of a widow notwithstanding the fact that the husband had "contracted himself out" by subscribing to the funds raised for such purpose, and notwithstanding also the fact that he was in the employ of a contractor rather than in the immediate employ of the colliery in question. It is understood that this decision will be appealed against, but when lawyers disagree who shall decide. The difficulties in the practical working of the Act foreshadow an early amendment. It is a subject of the most momentous importance to the whole manufacturing and mining industries of the kingdom, for should it be confirmed that it is illegal for employers and employed to contract themselves out of the responsibilities imposed by the Employers' Liability Act by means of mutual assurance, then it seems to us the whole machinery of employment will be thrown out of gear and the most disastrous consequences to both sides ensue.

MEXICAN PROSPECTS.

Mexican affairs have for many years possessed a certain interest, and to no one do they appear to be more interesting than to General GRANT, for some eight years President of the United States of America, and the persevering and indomitable soldier who came to the rescue of the Republic when it was sorely tried by the great rebellion of 1861-5. It is curious to observe how powerful are the effects and influences of our early impressions. General GRANT, as a young subaltern in the American army made his first campaign in Mexico in 1846, and he has ever since taken a warm interest in the politics and development of the Mexican nation. If General GRANT had not participated in the Mexican campaign of 1846 he would probably never have written that celebrated letter to President LINCOLN, which led to the withdrawal from Mexico of the French troops dispatched thither by NAPOLEON III. to support a brave but rash Austrian archduke upon a precarious throne. It will be remembered that after knocking the Austrians about in Northern Italy in 1859, NAPOLEON III. formed the extraordinary resolution of dispatching a large French army to Mexico under Marshal BAZAINE for the purpose of forcing an Austrian archduke as emperor upon the Mexican republicans. It must be admitted that the past history of the Republic of Mexico had not been a creditable one; but, still, it is difficult to explain the Mexican expedition of NAPOLEON III. upon any other hypothesis than that he found it necessary to employ somehow or other the more turbulent spirits of the overgrown French army. It is not too much to assert that in Mexico NAPOLEON III. found his political grave. When General GRANT saw a large body of French troops enforcing an oppressive policy in Mexico, he wrote that remarkably brief, but wonderfully significant letter to President LINCOLN, in which he curtly told his Excellency that the interests of the United States required that the French troops should withdraw from the neighbouring Republic. NAPOLEON III. tamely submitted to this unmistakable rebuff, and from that moment his political star sank rapidly, until his career terminated abruptly in the memorable catastrophe at Sedan. It is not too much to say that the politics of Europe in the ten years ending with 1870. When General GRANT was occupied with the cares and business of the White House he did not make another Mexican demonstration, but when he was relieved from the preoccupations of office his active mind was once more directed to the country in which he had drawn his sword some 30 years before.

When General GRANT began to think once more about Mexico in 1877 or 1878, he was not enabled to strike any great political coup, but he directed the attention of what business men would term the enterprise, and what moralists would designate as the avarice, of the United States, to the tempting opportunities which Mexico offered for the employment of the surplus capital which, after 12 or 13 years of unbroken peace, had begun to burn in American pockets. If the letter addressed by General GRANT to President LINCOLN in 1867, upon the subject of the occupation of Mexico by French troops, was regarded then as the utterance of a political oracle, General GRANT proved no less successful as a leader of American commerce when he called attention to the dormant wealth of Mexico in 1878 and 1879. Ever since those years there has been a steady flow of American capital and American energy in the direction of Mexico, until that quarter of the American continent appears now to have a very fair chance of being fairly riddled by American railroads, and of being, at the same time, overrun by American business men. That Mexico has profited from all this is shown in the report issued this week by the Mexican Railway Company (Limited). This is an English enterprise which, until the last year or two, had virtually a monopoly of the railway enterprise which had been developed in Mexico, although it has now an abundance of American railroads. The Mexican Railway Company (Limited) has, however, profited materi-

ally from the increased activity observable in almost every branch of Mexican industry and business, and, while for many years past its stocks were almost profitless, and certainly dividendless, the directors are enabled this week to recommend the distribution of a dividend at the rate of 6½ per cent. per annum upon the ordinary stock, full provision being made, of course, for all preferential charges. The directors of the Mexican Railway Company (Limited) express the opinion in their report that Mexico, as a whole, is slowly but steadily advancing. If the five years ending with 1880 are compared with the five preceding years, the total national revenue will be found to have increased by more than 30 per cent. The growing commercial activity of the country is further illustrated by the fact that the revenue from stamps has nearly doubled, while that from the post office has experienced a more than similar increase in the last ten years. We regard all this with satisfaction, because, although American enterprise has no doubt attained an important footing in Mexico, that country is also a consumer of English products of various kinds. The mineral wealth of Mexico is also very considerable, and there is a strong likelihood that it will now be turned to more profitable account than hitherto. In a word, Mexico appears to us to now offer a lucrative field for the employment of English resources, as well as for the investment of the surplus capital of the United States.

THE ROYAL COMMISSION ON MINES.

It is now stated that the labours of the Royal Commission on Mines have just been brought to a close so far as the taking of evidence and making experiments are concerned, so all that is now left to be done is the preparing of the report. From it, however, we do not expect that much addition will be made to the known and recognised systems of preventing accidents in mines from explosions or other causes. The ground has been gone over previously by the ablest mining engineers and practical chemists of the day, and it is not likely that even with a couple of professors, a well-known North country engineer—Mr. LINDSAY WOOD (whose father, the late Mr. NICHOLAS WOOD, was the Nestor of the mining profession), who has written some valuable papers on mining, a practical miner like Mr. BURT, M.P., with so excellent a chemist as Mr. ABEL, will throw much light on the burning question as to how mining explosions in particular can be prevented. Up to the present time the Commission has been in existence three years and three months, visiting most parts of the kingdom where mining is carried on, and whilst the members of it have been prosecuting their enquiries and making experiments 3700 persons have been killed in our mines, of which 991 of the deaths resulted from explosions. We must, therefore, assume that the Commission has not been able to point out a remedy for such catastrophes, involving such a heavy loss of life. In the preliminary report issued not long since the principal point was an elaborate series of experiments with respect to the effects of coal dust in relation to explosions. The deductions made from the results obtained by the experiments were by no means original, for they had long before been given in the *Mining Journal*, and in a short article which appeared on March 8, 1879, about a fortnight after the appointment of the Commission, under the head of "Colliery Explosions, and Coal Dust," we drew special attention to the subject, and the preliminary report, to which we have alluded, fully bore out our views.

A great point has been made of the lamps with a view to the pointing out of the safest, but this important matter had been previously thrashed out by the North of England Institute of Mining Engineers and by the Midland Institute as well, whilst the members of the latter body know more about sudden outbursts of gas from practical experience than it is possible for the members of the Commission to do, and these are the great dangers which the mining engineer has to try and guard against, for they baffle all ventilation by their subtlety and immense force, and the probability is that some of the most serious of explosions have been caused by these sudden escapes of vast volumes of gas from the floor of some of our mines. But it may be fairly assumed that if the Commissioners had found any practical means for lessening, if not altogether preventing, fatal accidents in mines, they would not, whilst carrying out the instructions of the Home Office, have kept quiet and given no signs of their existence whilst 3700 persons were killed in our mines. The Commission has been truly a roving one, for many districts in England, Wales, and Scotland have been visited, so that a very pleasant time has been spent by the gentlemen composing it. Looking at the length of time occupied in visiting, investigating, and making experiments, with special trains and conveyances from one place to another, the Commission promises to be one of the most costly that has been known for many years past. Such being the case, we think there should be corresponding results for such a heavy outlay. This was certainly not foreshadowed by the preliminary report, and we are afraid that the expectations of those who believe that the Commission will be able to point out a way or system by which explosions in mines in particular can be prevented or greatly lessened, will be much disappointed. The panacea for decreasing, if not altogether doing away with, explosions has been frequently pointed out in the *Journal*, that is doing away with the use of powder in mines and adopting the best safety lamp which has been tested by gas itself. We, however, incline to the opinion that there will be long before an electric safety lamp that will be most effectual, and Mr. Swan has shown that the difficulties connected with the construction of such a desirable mining adjunct can be overcome. Before long we hope to have the full report of the Royal Commission before us, when we shall be able to see whether the results of its long labours justify the cost it has been to the country.

PERRYLINE FOR PROTECTING IRON FROM RUST.

The compound or mixture which forms the subject of the invention of Mr. CHARLES JAMES DAVIDSON, Wolverhampton, is designated "perryline," and is thus prepared:—A solution consisting of 2 ozs. of gutta-percha dissolved in 12 ozs. of resin spirit is boiled with 5 ozs. of camphor in 2 quarts of linseed oil, and to the compound or mixture thus obtained is added a solution consisting of 3 ozs. of caoutchouc dissolved in 1 lb. of turpentine, and there is added also 2 lbs. of plumbago or 2 lbs. of white lead, and also 3 pints of linseed oil, 1 lb. of copal varnish, and 8 ozs. of liquid terebinte. The copal varnish assists in setting the perryline when laid on to the surface to be coated with it. The naptha mentioned in the provisional specification is not now employed, as it was formerly used to dissolve the camphor which is now dissolved in the linseed oil. The 2 ozs. of gutta-percha dissolved in resin spirit may be omitted if desired, in which case 5 ozs. instead of only 3 ozs. of caoutchouc should be dissolved in the 1 lb. of turpentine. In either case the camphor dissolved in boiling linseed-oil must be employed. Perryline which has gutta-percha as an ingredient sets harder than when made without it, and also acts to some extent in resisting the action of acids. The caoutchouc is preferred to be dissolved in the turpentine cold, as being more convenient and free from danger, but the process may be considerably quickened by heating the turpentine. The same remark applies also to the dissolving of the gutta-percha in the resin spirit.

The perryline is a liquid, and is laid on to the article to be coated by means of a brush, as in painting, or if convenient and desirable the article to be coated may be dipped into the liquid. The perryline should always be shaken or stirred whilst in use, as the heavier ingredients settle at the bottom. The plumbago is usually employed as an ingredient in the perryline when the same is to be employed as a coating to stoves, fenders, and such like articles which are intended to be afterwards blacklead. The white lead is employed as an ingredient in the perryline when the same is to be used as a paint either with or without a mixture of colour, and when the white lead is used the perryline dries quicker than when the plumbago without white lead is employed as an ingredient.

The perryline may be applied also to the coated surface of iron coated with tin or other metal or alloy of metals to prevent oxidation taking place through the pores or interstices of the coating metal or alloy, and is especially suitable in the case of tin-plates, which are afterwards to be japanned or otherwise similarly treated.

as the Japan, &c., is thus prevented from peeling or chipping off. The perryline appears to have a cementitious quality, in addition to being an anti-corrosive coating for iron, as Japan or similar coating laid upon it does not chip off so readily with rough usage as when laid direct upon the metal surface.

When perryline is used as a coating for iron on which rust has previously formed, it is preferred to employ stronger solutions of caoutchouc, gutta-percha, and camphor, by using only, say, 3½ ozs. of caoutchouc, 2½ ozs. of gutta-percha, and 6 ozs. of camphor, instead of the 3, 2, and 5 ozs. of such ingredients respectively, as before stated, the other ingredients being kept as before. The loose rust should be brushed off, and the perryline, when laid on, will form in combination with the adhering rust a cement which will prevent further oxidation taking place. In this case it is preferred to coat the iron twice with the perryline before painting. The perryline dries without heat, and does not readily crack or chip off the surface on which it is laid; it resists moisture or atmospheric influence, and retains its anticorrosive and adhesive qualities for a long time.

THE JABLOCHKOFF LIGHT IN PARIS.

The announcement in London that the Jablochkoff light is no longer used in the Avenue de l'Opera at Paris has called forth an explanation from the London representative of the Compagnie Générale d'Electricité (which owns the Jablochkoff patents), that it is merely a temporary suspension, and that the statement made last month, that the contract had been renewed for three years by the Municipality of Paris, is absolutely correct. As a matter of fact, the lighting of the Avenue de l'Opera, Place de l'Opera, and Place du Theatre Français has been a very costly experiment for the Compagnie Générale d'Electricité, owing to perhaps exceptional circumstances. For the comparatively few lights in the thoroughfares mentioned several—five or six—dynamoes have been used, involving the use of as many separate engines and a large number of extra attendants. It has, moreover, been necessary to rent basements, often at fabulous prices, for housing the engines and dynamoes, so that, altogether, the lighting has been carried on at a heavy loss. Under its "new arrangement" it is believed that the company will be able to carry their main conducting wires through the sewers, although these are pretty fully occupied one way and another, so that the whole of the lights from the Opera House to the Theatre Français can be supplied with current from one central station. This, coupled with the fact that by the new contract the Municipality gives the company power to introduce the light into the houses in the district served by the company's mains, will, it is confidently believed, change the loss into a good profit.

For simplicity the Jablochkoff system is unquestionably without a rival, but it is still practically defective in two very important points. The momentary stoppage of the current not only extinguishes the light but renders the candle absolutely useless until it has been re-lit to form a new bridge. The other defect is the difficulty of shunting on the next candle. This shunting has always given great trouble, and this practically increases with the number of lamps supplied with current from one station. When the Jablochkoff system was first introduced on the Thames Embankment a man ran along every 90 minutes and shunted, lamp by lamp, by hand. The time occupied was at least one minute per lamp, and the waste of carbon considerable. The system of mechanical shunting adopted as an improvement was about as clumsy as could well be conceived, and does not reflect any great credit for inventive ingenuity upon those who designed it. To carry it out no less than 22 miles of wire has been laid down from the Charing Cross station, and although the risk of failure is proportionately great nothing better has yet been done. There is still much to be done before either the Jablochkoff or any other system yet before the public can claim success if success be understood to mean permanent profit to those supplying the light.

GOLD MINING IN AUSTRALIA.—We have been favoured by Mr. THOMAS COUCHMAN, the Secretary for Mines, with the reports of the mining surveyors and registrars of Victoria for the quarter Dec. 31. The total number of miners employed was 38,136; of these 14,007 Europeans and 7867 Chinese were engaged in alluvial mining, and 16,188 Europeans and 74 Chinese in quartz mining. The approximate value of the mining plant in use was 1,860,577. The gold raised during the quarter reported on was 87,550 ozs. from alluvium, and 137,521½ ozs. from quartz—225,071½ ozs. The quartz treated averaged 8 dwts. 8-49 grs.; the tailings and mullock, 2 dwts. 20-14 grs.; and the pyrites and blankings, 2 ozs. 5 dwts. 2-31 grs. In the central division of Ballarat the dividends paid from quartz mines during the quarter were:—Band of Hope and Albion, 89807; Brennan's Freehold, 2800; Temperance, 940; New Koh-i-noor, 12007; Williams' Freehold, 2600; Black Hill, 744; Wilson's Freehold, 3007; Young's Band Extended, 24007; Band of Hope No. 4, 18007; Band of Hope No. 2, 25007; Band of Hope Quartz, 13507; Smith's Freehold, 14007; Washington, 18007; and North Band and Albion, 18007.—25,754. The report of the several officers concerning their own districts appear to be, on the whole, more favourable.

GOLD IN SOUTH AFRICA.—We learn from Cape Town (May 2) that Mr. McHattie, a well-known speculator in the Transvaal, is taking to England 400 ozs. of fine gold found in the districts of which he has a concession, near Lydenburg. It is rumoured that large quantities of gold have been found on the banks of the Crocodile river.

SARACACCA PIONEER GOLD.—The company have sold to Messrs. Pitkey and Abell 219 ozs. 3½ dwts. of gold, at 78s. per ounce, this being the first sale made by the company.

The miners of the United States may well be congratulated upon the profitable nature of their investment. There are at present nearly 100 mines in the dividend lists, and the dividends declared, whether taking last year alone or the total, are really astounding. At the present time Colorado is paying most largely, the amount being last year \$3,211,750, total \$7,220,411; but other States have also left their mark, as California paid last year \$2,111,594; total, \$38,624,425; Nevada, \$1,682,583; total, \$85,792,170; Michigan \$2,815,000; total, \$43,330,000; Utah, \$1,200,000; total, \$5,010,000; Arizona, \$2,500,000; total, \$4,060,000; Dakota, \$1,030,000; total, \$2,265,000; Montana, \$395,000; total, \$907,500; and Mexico, Missouri, and Georgia have also made small returns.

SUMMER TOURS IN SCOTLAND.—One is reminded that the holiday season is again approaching by the issue of the new annual edition of the official guide to McBrayne's Summer Tours from Glasgow to the Highlands, and probably few will read the beautifully illustrated little volume without contracting the wish to make one or other of the tours indicated. The illustrations in the present edition include Dumbarton Castle; the Kyles of Bute at Glen Caladh; the Linnet on the Crinan Canal; Oban from the south-west; the Monastery, Fort Augusta; Fingal's Cave, Staffa; the Clamshell Cave, Staffa; Iona Cathedral and St. Oran's Chapel; Flowerdale, Gairloch, Ross-shire; Kilchurn Castle, Lochawe; the new steamship Claymore, and Corryhalloch Falls, Braemore, near Ullapool, and as each is well chromo-lithographed the illustrations alone are worth the shilling which the book costs. For those intending to make the tour the guide will be invaluable, and even those who have no intention of doing so will find in it a couple of hours good and interesting reading.

THE HILSTON DISTRICT.—Referring to the letter of Capt. S. Harris in last week's Journal, Mr. Thomas Spargo telegraphs from Redruth that his "attention has been called to the most uncalled for letter and paragraph in the Mining Journal ever known respecting Voss. Little or no truth in it." The complaint on the other side is that far too much has been written and published in the Mining Journal concerning Great East Vor and New Great Wheel Vor, which requires confirmation, and that no mine reports are published concerning the properties; the agent's letters being mere commendatory remarks unaccompanied by any statement of the number of men employed or of the amount of ground removed from week to week. Mr. Spargo could have given the details asked for in the same number of words as in the telegram sent. Will he also state

what the men are doing and what machinery is in use on the mines, or direct the agent to send particulars? If not, perhaps Mr. R. Symons, who writes in another column, could do so.

IMPROVED COLLIERY AND MINING WAGONS.

With a view greatly to increase the carrying capacity of colliery and mining corves so that the number used for a given output is much diminished Mr. ROBERT HADFIELD, of Southampton-buildings, proposes to cast the body of the wagon, together with the bottom and sides thereto, in steel or malleable iron, preferably steel, and at the same time he casts on at each end of such wagon body suitable buffers, pedestals, and lugs for attaching hooks or chains thereto, thus producing a complete wagon body at a single casting. If preferred, however, such pedestals, lugs, and buffers may be cast separately or afterwards rivetted, bolted on, or otherwise secured to the wagon body. When the body is so cast he drops the wheels and axles in their places, and thus produce a complete corve or wagon ready for use. When necessary he increases the height of the sides of such corve or wagon body when so cast as aforesaid by attaching thereto in any convenient manner auxiliary side pieces made of steel, iron, wood, or other suitable material, thus increasing the depth and height as required. If desired the bottom may be grooved or corrugated to strengthen it. The space between the wheels now usually occupied by the wooden framework of ordinary wagons is utilised for carrying materials without increasing the height of the wagon.

The improved corve may be readily attached to existing colliery or other plant, as it is so constructed as not to interfere with any haulage or lubricating systems now in use, and does not require any special wheels or other fittings. It is, moreover, not liable to be bent or knocked out of shape, as at present frequently occurs with the ordinary built up wagons or corves, the sides of which are made of thin rolled sheet iron or sheet steel plates, and thus in the case either of a runaway or of a rope or chain breaking, such sheet steel or wooden corves get bent and broken, and when so damaged cannot be easily repaired or the sides replaced, whereas in the improved cast steel corves only the woodwork thereof would, under similar circumstances, be damaged, and such woodwork could easily be repaired and renewed. The improved cast steel corve is, therefore, claimed to be practically almost indestructible, as it has no parts therein, such as bolts and nuts, to break or work loose, while there are no rivets, brackets, or other loose fittings to cause loss, annoyance, and trouble, the corve or wagon when of the ordinary size being one solid homogeneous steel corve or wagon complete in itself, exclusive of the wheels, axles, and woodwork.

One great advantage claimed for the cast steel corve is that no wooden or iron frame is required therein, as in the ordinary built up corves now in use, and by so dispensing therewith, not only is the carrying capacity of the corve or wagon considerably increased, but the diurnal output from the mine or colliery is greatly augmented with the same or even a lesser number of corves. Thus, for instance, in a colliery or other mine drawing ordinarily 1000 tons per day of eight hours with the ordinary corves or wagons, the same colliery or mine would, by the employment of the improved corves or wagon, though of the same height from the rails, produce about 1150 to 1250 tons per diem. Another advantage: he is enabled to dispense with the ordinary draw bar, as by casting lugs at each end, as already mentioned, for attaching the drag links thereto, the solid bottom of such cast steel corve or wagon body serves as a drawbar for the same. Another great advantage of these cast steel or malleable iron bodies is that they occupy little space, while the wheels, axles, and pedestals can be taken off the wagon frame and packed inside thereof for transit, thus effecting an immense saving in bulk, and consequently in the cost of carriage.

NEW METHOD OF MINING COAL.

One of the most interesting papers read at the recent meeting of the Iron and Steel Institute was that on a new method of mining coal by Mr. PAGET MOSLEY, and from the favourable reception it had there can be little doubt that, in the opinion of a thoroughly practical assembly, it was the general opinion that the advantages which he claimed for it were worthy of wide recognition. It appears that, apart from the absolute safety to life and the protection it affords against minor accidents, it is anticipated that it will result in economising the mineral wealth of the country, by enabling a larger quantity of coal to be raised from a given area than by the present modes of working, and that the commercial advantages will extend from all owning or working coal down to the collier himself. The paper describes Messrs. Smith and Moore's invention, which for some months has been in use at the Shipley Collieries, Derbyshire, and which is intended to replace blasting with gunpowder or dynamite. Nearly two years ago experiments were commenced by some of the officials at these collieries, with a view to practically utilising the power of lime, which when concentrated and used in a confined condition produces most successful results, while the process has for its recommendation perfect safety, simplicity, and economy. The present mode of operating is to employ lime in a specially caustic state made from mountain limestone. This is ground to a fine powder, and consolidated by a pressure of about 40 tons into the form of cartridges 2½ in. in diameter, having a groove along the side. These are then packed into air-tight boxes to protect them from damp, and are ready to be conveyed to the mine for use.

The cartridges are made by hydraulic power in a press specially constructed for the purpose, which can be erected at a small cost at any colliery. The shot holes are first drilled by means of a light boring machine, and an iron tube, about ½ in. in diameter, having a small external channel or groove on the upper side, and provided also with perforations, is then inserted along the whole length of the bore-hole. The tube is enclosed in a bag of calico, covering the perforations and one end, and has a tap fitted on to the other end. The cartridges are then inserted and lightly rammed, so as to ensure their filling the bore-hole. After the cartridges have been enclosed by tamping, in the same way as with gunpowder, a small force-pump is connected with the tap at the end of the tube by means of a short flexible pipe, and a quantity of water, equal in bulk to the quantity of lime used, is forced in. The water being driven to the far end of the shot-hole through the tube, escapes along the groove and through the perforations and the calico, flowing towards the tamping into the lime, saturating the whole of the charge, and driving the air out before it. The tap is then closed, so as to prevent the escape of the steam generated by the action of the water on the lime, and the flexible pipe attached to the pump is disconnected. Experience has shown that after introducing the water there is always an interval before the steam attains a high pressure, so that all danger can be avoided. The action of the steam first takes place, cracking the coal away from the roof, and this is followed by the expansive force of the lime. The pressure of steam generated by the usual charge of seven cartridges, as employed at Shipley, is 2850 lbs.

The sprags are left in under the coal, so as to allow the force to exert itself as far back as possible, and in many instances the coal is forced off and falls for a distance of several inches behind the end of the drilled holes. In 10 to 15 minutes, on the removal of the sprags, the coal falls clean from the roof in large masses ready for loading, practically making no small. If all the sprags are removed at once, the entire length of coal operated on falls, but the collier can, if more convenient, remove two or three sprags at a time, and let down as much as he requires for loading, leaving the rest to remain spragged up till wanted. In places with bad roofs this is especially advantageous. The apparatus is simple and inexpensive, it is easily carried about and kept in order, and it can be used in narrow and cramped workings and in thin seams. In the coalfields of Europe and America together, the number of fatalities annually occurring in our coal mines may fairly be numbered by thousands, and it is a serious reflection upon scientific knowledge that heretofore it has furnished no adequate remedy for getting rid of, or even sensibly reducing, the risks incidental to, this most precarious employment. It is lamentable to be compelled to state that, so far from any such result having occurred, the number of those killed in coal mining not only shows an absolute increase from year to year,

but in some countries, as in Austria and Germany, has been increased relatively to the total number of hands employed. It is thus, Mr. Mosley observes, perhaps the chief merit of the new process, and it is certainly the claim which, of all others, its inventors put forward with the greatest pride, that it enables the coal hewer to carry on his trade with practically the same amount of safety as pertains to other occupations; and we do not hesitate even to say that the universal adoption of caustic lime for getting the coal, combined with the introduction of a more perfect safety-lamp, would make mining mortality a very different thing in the future to what it has unfortunately been in the past.

THE RICHMOND-ALBION LITIGATION.

It has already been announced that the decision of the District Court of Nevada which had been given in favour of the Richmond Company has been reversed by the Supreme Court of Nevada, and that the Richmond Company have determined to appeal from this latter and adverse decision to the Supreme Court of the United States at Washington. Under these circumstances the effort which is being made both in Nevada and in this country to create the opinion that the litigation is finally settled in favour of the Albion is not justified by facts. The manner in which justice is administered in the United States is much the same as in England, and as the two decisions already given have been directly opposed to each other, there are no grounds for assuming which view will be confirmed by the Supreme Court of the United States. We are not accustomed in England to accept the adverse decision of a court as evidence of the corruption of the judge who pronounces it, and it is regrettable that the tone and remarks of even the most reliable newspapers of the Pacific States indicate that the purchase of decrees is there a common practice; unless indeed the integrity of the judges is greater than the veracity of the Nevada press. At Washington sinister influences are not to be feared, and it is probably upon the known impartiality of the judges of the Supreme Court at Washington that the Richmond Company rely for a decision in their favour. Like all litigants the Richmond Company doubtless believe themselves to be right, but if the Washington decision be against them no shareholder in England will attribute the loss of the suit to the corruptibility of the Court.

As the matter at present stands it is now decreed by the Courts of Nevada that the claim of title and right of possession of the defendant Richmond Company to that portion of the mining claim, lode, and premises in controversy, described in plaintiffs' complaint as the Uncle Sam lode, lying westerly of the north-west end line of the Tiptop patented claim of the defendant extended from the quartzite footwall to the shale hanging-wall, and lying westerly of the said line "A C," is without right, and wholly invalid and void, and that the claim of the plaintiffs thereto and to the right of possession thereof is good and valid.

It is further decreed that the plaintiff Albion Company's claim of title and right of possession to that portion of the said mining claim and premises lying between the shale and the hanging-wall, and the quartzite footwall to the north-west, and westerly of said line "A C," is good and valid; that the defendant is the owner, in the possession of, and entitled to the possession of, all of the said mining claim, lode, and premises lying to the easterly of the north-west end line of the Tiptop claim, which said end line is designated as the line "A C," extended from the quartzite footwall to the shale hanging-wall, and that the plaintiffs are the owners of, in possession of, and entitled to the possession of, all that portion of the said mining claim and premises lying between the quartzite footwall and the shale hanging-wall to the north-west of said line "A C." It is further ordered that the injunction heretofore granted in this action restraining the defendant in so far as it relates to that part of the lode or premises north-westerly of said line "A C," be continued against defendant in full force perpetually, and that the plaintiffs do have and recover of and from the defendant their costs, taxed at \$405-95. These details will be useful to shareholders in assisting them to comprehend accurately the further progress of the case.

EXPERIMENTS WITH POTENTITE.

The adventures of several mines in South Devon have recently been much interested in some experiments made with potentite by Mr. Courtenay, representing the proprietors of this explosive, which, although it has not long been before the public, is strongly advocated by many who have tried it, on account of its cheapness, safety, and effective results. Experiments made at Devon Friendship Mine by Mr. Courtenay and Mr. Daw, jun., who is connected with Norwegian mines, have proved highly satisfactory. The explosive was first tried underground, and the unanimous verdict of the agents present was that it had a superiority over any other explosive, both for execution and freedom from noxious gases. Some interesting experiments with potentite and dynamite were afterwards conducted at surface. A solid piece of cast-iron, 7 ft. long, 21 in. wide, and 2½ in. thick, was fired with two ½ cartridges, and the entire block was broken to pieces. It was the unanimous opinion that a less quantity would have been sufficient for the work. The effect of dynamite was then tried upon a similar block, and whereas one dynamite cartridge failed to produce the desired effect, a single cartridge of potentite broke up the mass of iron completely. It was afterwards tested in some holes drilled in solid rock on surface, and the results were so satisfactory that a quantity of the new explosive was at once ordered for use at the mine. Experiments were also made at the Old Gunnislake and Sortridge Mines, in the presence of Captain Skewis, the managing agent of these mines, the other agents, and a number of local gentlemen. To show that the potentite does not contain its own means of ignition, and that the cartridges may be conveyed and stored with perfect safety, Mr. Courtenay lit one, and stood by it until it was consumed. He then placed a detonated cartridge on the top of a large boulder, and it exploded with a loud report, without emitting any noxious gases.

The explosive was afterwards tried in the adit at the Sortridge Mine, where two holes were charged in very hard rock, which is being excavated for the erection of a water-wheel; the results were exceedingly satisfactory. One hole was 3½ ft. deep and the other 4½ ft. The charge of potentite used in each hole was less in quantity than the ordinary charge of dynamite, but it shook the whole mass of rock out in either case, so that it could easily be removed with a pick. Captain Skewis and the men pronounced the result to be as effective as if the holes had been charged with dynamite to the usual extent. So thoroughly satisfied was Capt. Skewis with the results of the experiments that he at once gave Mr. Courtenay an order for a quantity of potentite for the Sortridge and Old Gunnislake Mines. Mr. Courtenay impressed upon the agents the fact that the railway authorities will transmit the explosive, and this would render it cheaper and more easily obtainable than dynamite, while, as had been amply demonstrated that day, it was by no means inferior to that or any other explosive. It is free from nitro-glycerine, its action is declared to be certain, and by its use labour can be economised, as work may be resumed immediately after the shot is fired. A cartridge of potentite was stated by Mr. Courtenay to be much lighter in weight than the same sized cartridge of other explosives, though equally effective, and in some instances, as in ½ and 1 in. sizes, will give almost two cartridges to one, weight for weight, thus reducing the cost, and an estimate was made, showing a saving of about 60 to 70 per cent.

THE ELECTRIC LIGHT COMPANIES.—In view of the large amount of attention at present being given to the question of electric illumination, the compendious and comprehensive table (second edition) just issued by Mr. F. C. MATHIESON, of Bartholomew House, Bank, can scarcely be over-estimated for utility and value. The 37 companies whose prospectuses were issued up to the present time have an aggregate capital of 13,738,000l., of which the vendors and promoters receive, in addition to founders' share privileges and a share of any profits realised, 2,670,750l. as purchase money. Of these 37 companies 22 were not quoted by dealers on May 22; of the remainder two were quoted nominally at par, two were at a discount, six or seven

were quoted at nominal premiums, and some three or four at heavy premiums. Mr. Mathieson's table gives the titles of the companies, the dates of issue, names of brokers, offices, amount of capital, amount issued, and particulars of shares, payments to vendors in cash and in shares, amount called up, and market price, together with a brief outline of the objects of the company. The table is a very cheap sixpence worth, and should be consulted by every capitalist.

Lectures on Practical Mining in Germany.

CLAUSTHAL MINING SCHOOL NOTES—No. CXCVIII.*

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SHAFT CONVEYANCE.

WIRE CONDUCTORS.—These appear to have been first brought into practical employment in England, the advantages of such guides being especially apparent in the case of circular shafts with cast-iron tubings. The advantages may be summed up as follows:—The expense is much less than by other methods, since the cross bearers in the shafts, the fastenings of the conductors to these and to each other are dispensed with. This entails the advantage of a comparatively clear shaft, and less obstruction of the ventilating current. They can be used in the upcast-shaft of pits having furnace ventilation. In consequence of the little room occupied by them the dimensions of the shaft need not be made greater than is necessary for the cages to pass each other. The greatest objection made to the use of wire conductors is that they are not rigidly fixed throughout their whole length, and that, in consequence, there is some liability of the cages catching as they pass each other. From the great immunity from such accidents over a number of years it would appear that the danger had at first been exaggerated. In order to avoid this danger it is usual to keep the adjoining guides of the cages from 10 in. to 16 in. apart, measured parallel to the line joining the centre of the two cages. If we assume the outside radius of the thimbles of the cage at 24 in. both cages must be deflected simultaneously from 24 in. to 54 in. before they will catch each other. We can readily find the force required to act in the middle of the shaft on each of the conductors, in order to deflect the cage to any given amount; from the rule that the horizontal deflection is to half the depth of the shaft, as the deflective force is to the total strain on the rope. Suppose that the depth of the shaft is 200 yards, and that each rope is kept tight by weights of from 1 to 4 tons (say) 2.5 tons. The force necessary to deflect one of the ropes to the amount of 2 in. is 6 lbs., or for a cage guided by four such ropes 24 lbs. In a pit three times the depth, the ropes would be weighted with 4 tons, the force necessary to deflect one of the ropes 2 in. is 3.2 lbs., or 13 lbs. to deflect a cage to the same amount when the cage is guided by four ropes. The rope forming the conductor is best made of a few but thick wires, in order to last long. The spiral formed by the wires is highly inclined, in order to diminish as much as possible any tendency to twist. The thickness of the wire varies between .08 in. and .26 in., and the diameter of the rope from 3 in. to 1½ in. It is found in practice that the wire rope conductors when they break do so generally near their attachment at the bottom of the shaft. Hence, it is usual to have a surplus length at the upper end sufficient to compensate for the lower portion broken off. Whether the cage is guided by three or four conductors those towards the centre of the shaft are placed not opposite, but from 5 in. to 10 in. sideways from each other, to avoid any liability of the thimbles of one cage catching against those of the other. In some cases where the shafts are deep the line joining the two inner conductors of one cage is placed as much as 30 in. distance apart from the line joining the two inner conductors for the other cage. It can scarcely be said that the necessity of having so much room between the two cages is practically a great disadvantage since, owing to the exigencies of ventilation, the shafts are now made of such a diameter that there is ample room for the cages. The thimbles, as they are technically called, which embrace the wire rope are generally made in two halves, and the bolts which fasten the two halves together pass through one of the bars or plates of the cage. The cage has two thimbles for each rope, one being attached near the top, and the other near the bottom, of the cage. The upper portion of each thimble is enlarged cup-shape, so as to facilitate lubrication. By many it is considered advisable to have rigid guides for the cage at the surface and at the landing place at the pit bottom. The cage is then usually guided at the two inner corners, and in the middle of the outer side. The guides for the former consist of long vertical bars of wood, which taper with a curve from the middle towards the upper and lower ends. These bear against the long vertical corner bars of the cage. The guide for the centre of the outer side of the cage consists of a long vertical casting, with two projecting ribs, which curve outwards at the end, so that the space between them is much wider towards the upper and lower ends. A projecting pin attached to the bottom of the cage traverses this space. Such a precaution appears superfluous at the pit bank and bottom of the shaft, since the ropes are extremely rigid near these places, and cannot be moved sideways without the application of considerable force. This arrangement is more necessary when winding takes place from different levels in the shaft, but they should then be arranged so that they can be readily removed when winding is taking place from a lower level.

The lower ends of the conductors pass through holes in a wooden frame fixed below the level of the landing place, and are kept tight either with weights or by means of a screw. The weights consist of disc-shaped castings, having a slit or slot in them to the centre, and which is slightly greater in width than the diameter of the rope, so that they can be slipped on to the rope or take off at pleasure without having to loosen the fastenings of the rope. The upper end of the rope is clamped to some portion of the head-gear or to a separate frame. The object of having a separate frame is to avoid the transmission of the vibration of the head-gear to the conductors. This disadvantage is rather imaginary than real, and the downward pull of the conductors may be looked upon as conducing to the firmness and steadiness of the head-gear. One of the best arrangements for fastening the upper ends of the wire conductors is to place a semi-circular casting, having a groove for the rope in its periphery upon a cross bearer in the head-gear. Two holes slightly larger in diameter than the rope are bored through the beam, and at a distance apart equal to the diameter of the casting just mentioned, which is placed between them. The rope is passed upwards through one of these holes round the casting and downwards through the second hole being clamped below the beam. The surplus loose end of the rope is fastened to some other portion of the head-gear, so as to be out of the way. A very useful mode of fastening the upper end of the conductor is given by Broja. This consists of a long iron rod, the upper end of which is screwed and provided with a nut; the lower end is forged out to a semi-circular channel, and a corresponding semi-cylindrical piece of wrought-iron is provided. The rope is placed between these two, which are gripped tight together, and upon the rope with four or five clamps, the loose end being carried away, and fastened to some convenient part of the head-gear. The upper end of the bar passes through a hole bored in one of the cross beams of the head-gear, and is secured on the upper side of the beam by one or two deep nuts and a broad washer. This arrangement allows of the rope being tightened up at the pit-bank, in addition to the means of tightening at the bottom of the shaft.

CAGES.—When the weight to be raised is considerable and the speed of winding great the mineral is best raised in the same vessel into which it is filled at the working place, the latter being raised in a box or "cage," as it is technically termed. The construction varies considerably according to the number of corves to be raised at one time and the arrangement of the corves in the cages. The first cages constructed were designed to carry only one corf, afterwards the size of the cage was increased to carry two, which were sometimes

arranged end to end, sometimes side by side, and at other times one above the other. As the shafts became deeper the carrying capacity of the cage was enlarged, so that at the present day cages to carry four, six, and eight corves at a time are by no means uncommon. When the cage is made to carry four or more corves at one time it is usually arranged with two or more stages, or decks, as they are more generally termed. We shall, therefore, classify the various constructions according to the number of decks, and give examples of each.

SINGLE DECKED CAGES.—Under this class we may make two subdivisions—those in which the cage has a pyramidal or prismatic form, and those in which both front and side elevation of the cage is rectangular. The former allow of a simpler construction, and will be considered first.

The following example is from Przibram:—The bottom of the cage is of the following construction:—Two flat bars of iron, 3 in. by ½ in. in section, and 50 in. long, are connected 32 in. apart at the ends to two cross bars of the same section by bolts, the ends of the latter being bent inwards. Two cross pieces of wood, 4½ in. deep, 3½ in. wide, and 33 in. long, are bolted on the outside to the above iron cross bars. A third cross bar of wood, 3 in. wide by 4 in. deep, is fixed in the centre. On the top of and to these the wood planking forming the floor of the cage, and also the rails, are fastened. The upper part of the cage is formed of a beam of wood 6 in. square in section, and 33 in. long, 6 ft. above the floor of the cage. A flat bar of iron, 3 in. by ½ in. in section, passes horizontally beneath the centre of the bottom of the cage, vertically up the sides, and over the top of the above-mentioned beam, to which it is also fastened. Two bars of iron, one on each side of the cage and of the above section, bent V-shaped and inverted, are bolted at the ends to the side bars at the bottom; the apex, or upper part, being bolted to the vertical sides of the bar last mentioned, at a short distance below the top of the cage. The guides on the cage are formed by bolting two L-shaped pieces on each side close to the bottom, and two straight projecting plates at each end of the top wooden bar. The rails are formed of angle iron, and are curved inwards at the ends. This cage is intended to carry only one corf.

The next example is also of a single decked cage, pyramidal in form, but arranged to carry two corves side by side. The design is by Schoneemann, the cage being employed by the Gerhardt Colliery, near Saarbrücken. The frame of the bottom is formed of iron, 3 in. wide by 3 in. in height and 7-16th in. thick, the frame being in two halves along the centre line of the conductors, and connected together by butt plates and angle iron. At right angles to the centre line of the conductors the frame is strengthened by six pieces of angle iron, which serve also as rails, being so arranged that two corves can stand side by side, the wheels of the corves resting on the two outside and the two inside rails; or the cage may be loaded in the centre with a single corf, the wheels resting on the intermediate pair of angle irons or rails. The main cross piece at the top is formed of two plates of iron 15 in. deep, bent at the ends at right angles and rivetted to side plates. Each of these side plates is connected with the bottom part of the cage by two vertical and two inclined pieces of angle iron, these two latter being wider apart at the bottom than at the top. The vertical angle irons serve as guides for the conductor. The side plates are held 4 in. apart by ferrules placed over the rivets and bolts between the plates. Four plates, terminating in eye holes, are bolted to the cross piece on each side near the ends, and serve to attach the ends of the four coupling chains to the cage. The four inclined pieces of angle iron are connected diagonally with the plates of the main cross piece to stiffen and strengthen the cage.

One of the simplest designs for a cage to carry one corf only is to have the bottom formed of a rectangular frame of wood. This wooden frame is connected with the cross beam of wood forming the top of the cage by two bars of iron, so that the two inclined portions of the bars are parallel and fastened at the top ends to the cross beam, and the horizontal portions pass beneath bottom. Half-way between the bottom and the top cross piece the inclined portions are connected by horizontal pieces of iron, which project so far that round bars connecting each pair of ends enclose the corf. The rails are formed of angle irons. The guides are fixed on each side to the ends of the top cross beam, and in the centre of the long sides of the frame of the bottom. The view of the cage looking towards the ends of the corf is a rectangular; looking at the long sides, it approximates to the shape of the letter A.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

May 25.—Very little change has taken place in the state of the iron and coal trades of Derbyshire and late, and in scarcely any branch is there anything like activity. There are a large number of furnaces in blast, and the output of pig is in excess of the combined local consumption and outside demand. Some of the foundries are favourably off for work, but there has not been that brisk demand for pipes that might be expected with such favourable weather for laying them as we have had for some months past. Machinery for mining purposes continues in fair request at one of the leading establishments who have earned a high reputation for it. At Dronfield the Bessemer works are busy, but the question now is, how long it will be before they are removed now that they have been purchased by Cammell and Co. for that purpose. The collieries in both North and South Derbyshire as well as in Nottinghamshire are still working short time, and are likely to be in that position for some months to come. Not so much house coal is being sent to London from the mines in the Chesterfield and adjoining districts, and the prices are so low as to leave no profit to the owners as a rule. Steam coal has been going off tolerably well, but not to the extent that can be desired, for the demand for it is below the production.

In Sheffield work has been going on much as usual, the heavy branches in particular continuing busy. There is a large output of steel and iron for armour-plates, and there is a steady business doing in plain crucible steel and Bessemer billets. Makers of sheepshears are now doing well, there being heavy orders in hand for Australia, South America, and other countries where hitherto there has been a good deal of competition on the part of American makers, but the Sheffield houses are now able to hold their own against all others. The cutlery houses are fairly employed, and there is a steady trade being done in machine knives. The edge tool makers are rather brisk, and the file, saw, and razor makers continue tolerably busy. All the Bessemer rail makers have as much as they can do, and there is also plenty doing in tyres, axles, and wheels. The mills engaged on iron-plates, sheets, and hoops have been kept fully running, and there has been an increasing demand for steel-plates for shipbuilding. At the foundries the men are working better, and there has been a better business done lately in heavy machinery for ore crushing and coal washing, as well as in lighter material for building purposes.

The coal trade is still quiet as regards households, and prices are now as low as 6s. per ton, which cannot leave any margin of profit to the colliery owner. A good deal of steam coal is being sent away to the Humber for several places, and an effort has been made to raise the price 6d. per ton, but it cannot as yet be said to have been successful, seeing that there can be a much larger tonnage raised than is now the case were there markets for it. Gas coal is quiet, but a tolerably fair business is being done in engine fuel with Lancashire. A large quantity of small coal is being now used for converting into coke, for which there is now a large and increasing demand for Lincolnshire and other iron-smelting districts.

GENERATING ELECTRICITY.—Mr. G. Dessaigne, of Villefranche, proposes the universal production of electricity by utilising the rotary motion of machines, electricity being generated without any additional cost, or a great deal cheaper than by the working of a dynamo-electric machine proper. He proposes to utilise the power of fly-wheels by adjusting magnets on them (preferably at their fellows), and placing bobbins or electro-magnets around such magnets, or he makes the magnets fixed, and the bobbins moveable if preferred. Electricity is obtained in this way without any

additional working expense. The invention, he says, can be adapted to other rotary motions or machines not provided with flywheels, by adjusting the generators of electricity on the axles or beams directly by lengthening their ends. For instance, he fixes the magnets on the axle and the bobbins on the frame of the machine, or on a frame constructed for this purpose. This latter mode is not altogether without cost, but is a great deal cheaper than using a special motor for generating electricity.

WATSON BROTHERS' MINING CIRCULAR.

WATSON BROTHERS,
MINEOWNERS, STOCK AND SHARE DEALERS &c
1, ST MICHAEL'S ALLEY CORNHILL, LONDON

Nearly twenty years ago the weekly information which had previously been published for a great number of years in WATSON BROTHERS' Mining Circular was transferred to the columns of the *Mining Journal*, with the following announcement.

In the year 1843, when mining was almost unknown to the general public attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. WATSON, F.G.S., author of "Gleanings among Mines and Minerals," "Records of Ancient Mining," "Cornish Notes" (first series, 1842), "Cornish Notes" (second series, 1843), "The Progress of Mining," with Statistics of the Mining Interest, published annually in the *Mining Journal* for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring the success in the aggregate," and Messrs. WATSON BROTHERS have always selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and shareholding than there is at present; and from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to offer, thus publicly, their best services and advice to all connected with mines and mining.

Messrs. WATSON BROTHERS are daily asked their opinion of particular mines, as well as to recommend mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

The great extension of mining business, the difficulty so often complained of by country shareholders in getting accurate and disinterested information as to the state of Cornish and Foreign Mines, and of the financial and real position of mining companies generally, have induced Messrs. WATSON BROTHERS to make their Circular now published in the *Mining Journal* more extensively known, and to state—

That they issue daily to clients and others who apply for it a Price List (as supplied to most of the London and country papers), giving the closing prices of Mining Shares up to Four o'clock.

They also buy and sell shares for immediate cash, for the usual fortnightly settlement in all Mines dealt in on the Mining and Stock Exchanges, at the close market prices of the day, free of all charge for commission. They deal also, on the same terms, in the Public Funds, Railways, Telegraphs, and all other Securities dealt in on the Stock Exchange.

Having agents in all the mining districts, they are constantly getting mines reported for their own guidance, and will also obtain special reports of any particular mine for their clients, for the inspecting agent's fee of £2 2s.

Messrs. WATSON BROTHERS take this opportunity of stating that on July 1 they took into partnership Mr. H. J. DEAN, who has been for a number of years associated with the firm, and Mr. W. H. H. WATSON, who has had some years experience of practical mining and engineering in Cornwall, and is the son of the senior partner. The firm will still be called that of "Watson Brothers."

The number of weekly communications received from almost every part of the world in regard to remarks in this Circular indicate so plainly how much they are read (and, we trust, appreciated) that they will be continued by the same writer.

Indeed, while new blood is introduced to attend to the more laborious and mechanical details of the business, the old will have more time to devote to their different departments.

After the extraordinary success of South Caradon, to which we have more than once alluded, the adjoining sett of West Caradon was taken up, but at a very early stage it was condemned by a practical agent who was then considered a great authority, and those who had applied for the lease forfeited the deposit rather than take the sett after such an opinion. It was then, in 1837, taken up by the Quakers, the principal of whom, the late Charles Fox, was one of the firmest supporters of the district, and frequently gave us the benefit of his advice and experience respecting it. The pursuer and manager was Mr. E. A. Crouch, and upon a very small outlay the mine became very rich, and up to 1863, the last time we visited it, the dividends paid had amounted to 110,926l. The first dividend was paid in 1844, and the highest paid in any one year was in 1860 when it was 14,436l., or 14l. per share. At this time the ores were fetching 10l. per ton, and were always rich beyond the average of other mines, excepting South Caradon. On Jan. 3, 1860, 325 tons sold for 3589l., and the total of ores sold in that year realised 32,473l. 5s. This was all got from the eastern part of the sett, and referring to this matter when on the mine in 1863 we wrote in the *Mining Journal*, in the month of May of that year, that "the most important point in the mine was a shaft only down 29 fathoms, at the western part of the sett," and added, "this part of the mine is all whole ground"—that is to say, unwrought ground. Many other mines were working at that time under the same management, nearly all returning ores, and some paying dividends, but they came to grief about the same time as West Caradon. The fact is, South Caradon and West Caradon were so exceptionally rich that the other mines, when only comparatively so, were thought little of and stopped without further exploration when certain points failed. This was the case not only with West Caradon, but with Craddock Moor and Gonomena; the former returned over 50,000l. worth of ore in a few years, paying about 5000l. in dividends, chiefly from Vivian's lode in West Caradon; Gonomena was worked on a continuation of Gilpin's and Taylor's lodes of West Caradon, also the Red lode and Sarah's lode. A good deal of tin was got from this mine, but it cut out early and turned to copper, and in 1863 the returns were 170 tons of copper and 3 tons of tin bimonthly.

The richer the ore the greater the price given per unit. For 5 per cent. ore we are of opinion that copper must be 80l. per ton to give 15s. per unit: 10 or 15 per cent. ore even at the present time might bring 15s. per unit. It is on account of poor ores, that is, those of 5 per cent. produce and under, that the rise is more particularly required: 5 per cent. ore at 10s. per unit (that is, 1 per cent. of produce) would, of course, bring 2l. 10s. per ton; the same ore at 15s. per cent. would bring 3l. 15s. per ton, which makes a great difference.

We have always had the opinion that the great deposit of bluestone at Morfa Du was the forerunner of a large course of copper, and since the meeting we learn that the lode at Ida shaft has improved to 4 feet wide, worth 6 tons per fathom, 3 tons of which is good bluestone, and 3 tons of copper ore from 4 to 5 per cent. produce. This is an important discovery and may materially alter the position of the mine, which has hitherto been dependent on the bluestone.

At Cook's Kitchen the shaft is completed to the 345 level, and in about a fortnight the level will be commenced with boring machinery. It will then take five months to reach the tin ground, and when reached it is expected the mine will be in a position to return 40 tons of tin per month.

The 170 west at Wheal Uny is said to be opening up a rich run of tin ground. Heavy expenses had to be incurred to put the mine into a needed state of repair, and these are now all but completed.

There is an improvement at Blue Hills, and the mine likely to take a better position. A level has recently been driven west from the Gompas adit, 50 fms. from surface, and is now worth 12l. to 15l. per fathom, and improving. This is considered an important discovery.

East Blue Hills continues productive. The 40 end is worth 10l. per fathom, and the level under 8l. per fathom, thus opening tin ground that will pay well to stoep.

This Baldu lode, which is north of the celebrated Pink lode, has become an important lode in the district of St. Agnes. It was opened a few years since in Penbells Mine, and produced from one level (the 30) over 100 tons of tin. It was then extended into Blue Hills sett, and for the last two years has yielded about 6 tons of tin per month. Next it was cut in East Blue Hills at a depth of 50 fms. from surface, and here it has also p

* Being Notes on a Course of Lectures on Mining, delivered by Herr Bergstrath Dr. von Gadowitz, Director of the Royal Bergakademie, Clausthal, the Harz, North Germany.

a continuously productive lode a mile in length. A remarkable occurrence, for very few Cornish lodes have lasted good for anything like this distance. The lode varies in width from 2 to 5 ft., and in value from 5l. to 50l. per fm.; and throughout the whole of the distance explored it has seldom failed to pay the cost of driving.

The lode in West Crebor is 3 ft. wide, worth 15l. per fathom, well defined, and very promising. Very shortly here two levels will be commenced driving on this lode and returns made.

It was decided at the last meeting of Polrose to sink the shaft another 10 fathoms on the Margaret lode, which had improved every level sunk. The shaft is going down on the course of the lode. Thus far, the mine has been a great disappointment to us, for we have carried on, and still hold, 1000 shares, and at one time had reasons for expecting to see them at 5l. per share. However, we are not, even now, going to despair, and a course of tin in the shaft may soon set the mine right again. Only a few months ago Killifreth shares were relinquished by the thousand, and lots offering to be given away on the market. The Cornish holders, however, stuck to the mine, and a discovery soon sent the shares from literally nothing to 6l. each. So long, therefore, as there are promising points for discoveries, we do not so much regard market prices, and Polrose may yet be all right.

We are glad to see that what we have all along written in regard to the bottom level at Wheal Crebor is proving strictly correct, and we are also glad to find that six months were not required to bring the points into play. Two winzes, it will be seen, are in course of sinking below the 120 fathom level; No. 1 worth 15l. per fathom, No. 2, 40l. per fathom.

SECONDARY GALVANIC BATTERIES.

The first form of secondary battery proposed by Mr. ALEXANDER WATTS, of Liverpool, consists of two or more plates of sheet lead coated with a mixture of manganese dioxide, calcium hydrate, and sodium chloride or calcium chloride, or preferably the mixture of manganese hydrate, calcium hydrate, and calcium chloride, known in the alkali trade as "Weldon mud" mixed with coarsely powdered carbon or coke. The plates coated on each side with the above composition, either as a magma or compressed and granulated, are placed in a leaden or other suitable tray containing solution of calcium chloride and piled one upon another, each plate being separated by a layer of felt or woollen cloth. The alternate plates are connected by strips of lead which have been left exposed for that purpose.

Mr. Watt's second form of battery consists of alternate layers of carbon or lead plates, or a combination of the two, a mixture of manganese dioxide (needle manganese) and carbon or coke both reduced to a coarse powder, and felt or woollen cloth piled up in a tray, as in No. 1, the whole being saturated with solution of ammonium chloride (sal ammoniac) or sodium chloride (common salt) or diluted sulphuric acid. The alternate carbon or lead plates are connected, as in No. 1. A more convenient form of cell consists of an ordinary battery jar divided down the centre by a diaphragm of porous clay, felt, cloth, or parchment. A plate is inserted in the middle of each division, which is then filled up with the mixture of manganese dioxide and coke, and filled with solution of sal ammoniac, common salt, or sulphuric acid as above. The charged porous pots (either fresh or exhausted) of the well-known Lécianché cell may even be used without further preparation than immersing a pair of them in one of the above solutions.

Another modification of the battery consists of a porous pot containing a plate of carbon and charged with a mixture of manganese dioxide (needle manganese) and carbon or coke in a state of coarse powder, and placed in a leaden vessel containing diluted sulphuric acid, the space between the pot and the leaden vessel being filled with a mixture of manganese, dioxide, and carbon or coke, as above. The plate of carbon forms the one pole, and the leaden vessel the other pole of the cell. Agglomerate plates, such as used in the new form of Lécianché cell, may be substituted for the above mixture. They may be attached to the carbon or lead plates by india rubber bands, or they may be wound with lead wire and insulated in any of the above ways. The two poles thus formed may be connected to an ordinary galvanic battery or a dynamo-electric machine, and a current passed into the cell. On detaching the battery or dynamo, and connecting the poles of the cell with a galvanometer or other suitable apparatus, a current of electricity will be obtained of a strength and duration proportional approximately to the time of charging.

TREATMENT OF ORES AND PRODUCTS CONTAINING SILVER, LEAD, OR COPPER.

The invention of Mr. F. M. LYTE, of the Science Club, is nearly allied to that method for which former letters patent were granted to him and described in the Journal in 1877. These he terms his sulphatation process, and is suited to the treatment of ores or metallic compounds containing silver, lead, or copper, either severally or combined, the same being associated with antimony, or such other metals as are capable of forming volatile chlorides in presence of hydrochloric acid aided by heat. In his sulphatation process he recommends the addition of a small portion of brine or solution of sodium chloride to the ore during sulphatation in order to fix the silver. He has found that this addition causes, if the heat be properly moderated, a volatilisation of all or any of those metals having a tendency, like antimony or arsenic, for instance, to form volatile chlorides with hydrochloric acid at high temperatures, while the other metallic chlorides formed remain fixed, and that if the quantities of sodium chloride and sulphuric acid be sufficient and rightly proportioned, all or nearly all of these metals last referred to may be distilled off and separated.

According to his present improvements the operation is performed as in his sulphatation process in an oven, stove, hot chamber, or reverberatory furnace. The ore may be calcined or not before treatment, some ores, such as galena, containing antimony, not requiring calcination; others, such as some arsenical and cupiferous ores, being improved thereby. The ore should be in fine powder, and being mixed with any suitable chloride, but preferably with common or ground rock salt, is placed in a reverberatory or muffle furnace in a vessel lined with or made of brick or some material capable of withstanding the acid and the high temperature, and there treated with sulphuric acid, as in the sulphatation process. The sulphuric acid employed need not be stronger than the ordinary chamber acid. The reaction generates much heat, and antimony or other volatile chlorides which may be formed already commence to pass off, but the completion of this volatilisation may be aided by gentle firing. The quantity of salt to be employed should be considerably in excess of that theoretically requisite to develop the hydrochloric acid necessary for combining with the metals; a quantity equal to the weight of the ore, or often much less, will generally suffice, but this will vary with the nature of the ore and whether previously calcined or raw ore be treated. The salt should be by preference rather in excess of the sulphuric acid employed, equivalent for equivalent. The heat is applied till the volatile chlorides have escaped as far as may be, and by this time the mixture having been raked about it will have become completely dried up.

A like result may be obtained by heating these ores to from 200° to 300° C., whether previously calcined or not, as may be advisable, and even in lumps or agglomerated masses in a current of hydrochloric acid gas; or the ore may be treated in the muffle or furnace by pouring aqueous hydrochloric acid over it under similar conditions as those above mentioned. A strong solution of ferric or ferrous chloride may also be used in place of the hydrochloric acid or sulphuric acid and common salt. Care must be taken so far to moderate the heat as not to volatilise the lead or silver chlorides which ever of these may be present. After the operation the ores may be liquated if thought advisable with cold water to withdraw any soluble salts, and if sulphuric and common salt have been used much sodium sulphate will thus be extracted. From the residue the lead and silver are obtained by brine or by a solution of alkaline earthy chloride, or it may be smelted for the metals it contains, as in his cold acid

treatment. The fumes arising from the furnace treatment should be got rid of by being conducted to a chimney or a suitable condenser, from which the chloride of antimony may be collected, and metallic antimony extracted. Compounds containing copper and nickel, with other metals capable of forming volatile chlorides, may also be treated in this manner.

DEPHOSPHORISATION OF IRON IN BLAST-FURNACES.

In the manufacture of iron various attempts have been made to dephosphorise the materials before their introduction into the blast-furnace, the phosphorus being generally found to exist in the form of phosphates of lime or alumina, and not as phosphate of iron, and it has been endeavoured to treat the phosphatic materials with acids, principally sulphuric acid, whereby the percentage of phosphorus has been considerably diminished. It has, no doubt, occurred to manufacturers to treat the phosphatic ores and materials in the furnace, but it appeared preferable to operate upon 1 ton of phosphatic cast-iron than upon 2 or 3 tons of materials, and it was known that the phosphates of alumina or of lime were reduced in the presence of the silicates of carbon and carbonic oxide, and that the phosphorus then combined with the iron, from which fact it would not appear possible to arrive at a useful result by this means. On the other hand, the endeavours made up to the present time to dephosphorise cast-iron, and which have partly succeeded, are based on the use of magnesia in a more or less pure condition as a lining to the furnaces, in which the purification of the cast-iron is carried on. In this operation, in which the phosphoric acid combines with the bases, forming slags, it has been proved that the magnesia operates in a different manner to the other bases, and that it alone is capable of retaining in a special degree the phosphoric acid produced by the smelting.

These considerations have led Messrs. PELLET and CAHEN, of Paris, to conclude that this property of magnesia of retaining energetically the phosphoric acid would subsist in the blast-furnace, even in the presence of the reducing gases and other agents, and that the phosphate of magnesia, even in the presence of silica, would not be reduced, or only slightly, by the carbon, oxide of iron, and other matters. According to their present invention, therefore, magnesia is added in certain proportions to the charge in the blast-furnace, in order to act upon the phosphatic earths (lime and alumina) contained in the iron ores, so as to produce phosphate of magnesia. It has been found that when heating phosphate of lime and silica in the presence of magnesia a double decomposition is effected—that is to say, phosphate of magnesia and silicate of lime are produced, and this at a temperature below that required for the reduction of the oxide of iron into metallic iron. This addition of magnesia in any desired quantity in the blast-furnace effects a considerable reduction of the percentage of phosphorus in the cast-iron produced. The quantity of magnesia to be added cannot be definitely given, as it will vary considerably, depending entirely upon the percentage of phosphorus contained in the ores, which must be ascertained beforehand by analysis, the proportion of magnesia being increased or decreased according to the degree of dephosphorisation desired, and according as the ore or the reducing agents themselves contain more or less magnesia. The magnesia may be added to the blast-furnace charge either in the form of dolomite or of carbonate of magnesia, or in some cases in the form of silicate of magnesia if the ore is too calcareous, as some clays contain as much as from 20 to 24 per cent. of magnesia. The magnesia may be added either directly after the iron ore, or together with the calcareous or siliceous materials.

Original Correspondence.

GREAT WHEEL VOR DISTRICT.

SIR,—Capt. Harris in last week's Journal has made many mis-statements as to the facts relating to Great New East Vor Mine. I suppose his remarks apply more or less to the two mines, the New Great Wheel Vor and the Great East Vor, which are circumjacent properties. His letter is a bold challenge to various reports I have sent to you from time to time. Capt. Harris has raised definite issues as to the method of working; as to the value of the lodes; as to the yield of tin per ton of tinstuff; and as to the yield of tin at the stamps. I distinctly join issue with him, and will in due course confront his mis-statements by official and authoritative evidence. I have already set enquiries on foot. Meanwhile I may state that Capt. Harris is interested in the neighbouring mine, the West Vor and Leeds United, and he certainly cannot promote the interest of his own constituents by attempting to disparage the enterprise, and to depreciate the property of his neighbours. There is a general feeling at Helston that the adventurers should hold correspondents responsible for mis-statements, but it is not always worth their while; mines speak for themselves. Most assuredly Capt. Harris has not succeeded in changing the opinion of Cornishmen on New Great Wheel Vor and Great East Vor, of the riches of which he is perhaps envious. Let him learn that envy is the tribute men pay to superiority whether of character or success, and let him await as a final and complete answer the sales from the several mines.—London, May 26 HUEL.

EUREKA (NEVADA) MINING DISTRICT.

SIR,—I have the pleasure to hand you my usual budget of news received from this mining locality:—The New York Daily Stock report says that a mining boom on merit has struck Eureka district, and evidently has come to stay.—There are many mining properties on Prospect Mountain that will make a good showing before this year has expired.—The miners on Prospect Mountain are making extensive preparations for a big summer's work.—The improved condition of our roads makes the teamsters comparatively happy. Most of the big teams will be working shortly.—Now that that the roads have improved, R. Sadler, Foley and Harub, and Riley and Lockwood intend getting up their coal teams, which have been turned out in Ruby Valley for the past two months. All of them will arrive in a few days loaded with barley.—Negotiations are pending for the sale of two or three valuable mines in this district to Eastern capitalists.—The immense machinery for the Eureka Consolidated new work is being shipped from Palisade hitherward. There is one piece of it that is likely to be delayed some time for lack of adequate means of transportation. The piece referred to is the bed for the engine. It is all in one, and weighs 16 tons. It is now stranded at Palisade, and it will have to remain there until a car is constructed for the special purpose of transporting it to Eureka. At present it rests upon a flat car of 20 tons capacity, extending from one end of it to the other. For the first half of the present month the bullion shipments of the Eureka Consolidated amounted to \$87,203.—Eureka Consolidated—"Old Reliable"—yesterday declared a dividend of 50c. per share. This means regular dividends right along.—The Eureka Consolidated Company are extracting large amounts of good ore from the lava beds.—The new furnace at the Eureka Consolidated works is entirely completed, and will probably be started up about the 1st of the coming month.—The tributers at the Phoenix Mine commenced hauling up ore on Thursday. The prospects of the mine are flattering. It is pretty generally conceded that extensive mining operations will be carried on at Safford mining district this spring. Several of the companies are making the necessary preparations to commence work. A new and extensive strike of ore has just been made in the Contentment Mine at Safford district. A specimen of the ore is on exhibition at Wells, Fargo and Co.'s office. A gentleman who came up on last night's train from Palisade informed us that another good strike of ore has been made in Contentment Mine at Safford district. The Bald Eagle Mine, owned by an English Company, commenced shipping ore to the furnace yesterday.—The new mill of Gilmer and Salisbury at Secret Canyon is progressing finely.—On the 200 level of the Shoo Fly Mine, on South Ruby Hill, the main ledge has widened out from 60 to 100 feet in width. At the 100-foot level the walls were only a few feet apart.—The News says that many Ruby Hill dabbles in stocks are buying and putting away Albion shares. They think the stock is a good buy.—In order to be secure against any possible emergency, the Albion Company last night placed an additional extra private guard on the ground in dispute between itself and the Richmond Company.—London, May 25. RUBY HILL.

Penalties of 10l. 17s., 4l. 18s., and 2l. 9s. have been imposed by the West Riding magistrates at Halifax on the manager, underground viewer, and deputy underground viewer respectively of a colliery at Southwarran for neglect of the provisions of the Mines Regulation Act, owing to which neglect a fatal explosion recently occurred. The prosecuting solicitor said it was desired to correct the erroneous impression that the coal measures in that district did not generate gas like the softer seams, and also to make it known that it was the determination of the authorities to enforce the law.

Messrs. Robert Cunningham and James Percy Leith have retired

from the board of directors of the Electric Carbon Storage and Apparatus Manufacturing Company of Scotland.

SECONDARY BATTERIES FOR ELECTRICAL STORAGE.

In constructing the secondary battery, known as Planté's, it has been customary to employ plates of lead, arranged in couples, and separated from each other by a stratum of dilute sulphuric acid. By means of this apparatus the energy of electricity can be stored in such a manner that if the Planté cell be placed for a time in circuit with an electricity generating apparatus of sufficient power it is after being detached from the electricity producing apparatus able to give out an electric current on its own account. When the Planté cell is constructed, as described, of simple plates of lead a very considerable time is required to effect the change necessary to render them capable of storing a large amount of energy. The object of the invention of Mr. J. W. SWAN, of Newcastle-on-Tyne, is to avoid this disadvantage by so preparing the lead plates that they are capable of rapid transformation into the condition necessary for large storage. The object stated is accomplished by cutting or scraping the surface of the lead plates employed to form the storage cells in such a manner as to expose a greatly enlarged surface to the action of the electrolytic gases produced in the act of charging, whilst at the same time leaving sufficient solid metal to give the plate the requisite stability, and hold the oxidised portions adherent to the body of the plate.

When the extension of surface is produced by scraping he so scrapes the surface as to raise on it a comparatively thick nap or fur in square or linear sections or portions of the surface. When he produces the extension of surface by incisions he employs a machine with cutting blades, and he so operates it that by a combination of a reciprocating action on the part of the blades and a progressive step by step action on the part of the lead plate, or *vice versa*, he obtains a succession of cuts very close together and penetrating the surface to a certain depth. He prefers to produce these cuts in square or linear sections or portions of the surface, and so as to leave partition walls of solid metal between the sections of cuts, whether square or linear, in order that the more readily oxidised, sliced, or cut portions of the surface may be held together by the uncut portions of the plate, and with the same object he preserves uncut a sufficient thickness of the metal, whether one or both sides of the plate are incised or scraped. Plates thus prepared are employed in the construction of secondary cells in the manner well known.

SOUTH AFRICA (KIMBERLEY) DIAMOND FIELDS.

INVESTORS desirous of getting AUTHENTIC and RELIABLE INFORMATION on the DIAMOND FIELDS in the above Region, can procure the same through the Agency of Mr. JOHN HOCKING, Engineer, Trewirgie-road, Redruth.

NICKEL MINE, IN NORWAY, FOR SALE.—KORNBROEKKE NICKEL MINE, the ore of which, according to the analysis of Dr. FRESSENIUS, of Wiesbaden, contains 3 per cent. IS TO BE SOLD. For particulars, apply to A. SEEHUSEN, Arendal, Norway.

SHARES FOR SALE:—150 CARN CAMBORNE at 12s. 6d. 12 BRATSBURG at 34s. Address, "X," 132, High-street, Notting Hill, London, W.

SLATE QUARRY ENTERPRISE.

MESSRS. D. C. DAVIES AND SON, ENGINEERS, OSWESTRY, usually have a few SLATE QUARRY PROPERTIES that they have personally examined, which they could confidently commend as suitable for either public or private enterprise.

THE RIO GRANDE DO SUL (BRAZIL) GOLD MINING COMPANY (LIMITED).

Notice is hereby given, that the FIFTH HALF-YEARLY ORDINARY GENERAL MEETING of the above company will be HELD at 47, Finsbury-circus, London, E.C., on WEDNESDAY, the 7th day of June, 1882, at two o'clock in the afternoon precisely, to receive a report from the directors, and to transact the ordinary business of the company. The Registers of Transfer will be closed from the 1st day of June to the 7th day of June, 1882, both inclusive. And notice is hereby further given, that an EXTRAORDINARY GENERAL MEETING of the above company will be HELD at the same place immediately after the termination of the Ordinary General Meeting, to pass a Special Resolution altering the regulations of the company, as originally framed, by authorising the company to so far modify the conditions contained in the company's Memorandum of Association as by sub-division of its existing shares to divide its capital into shares of smaller amount, as may be fixed by the said company by Special Resolution.

By order of the board, J. A. MORGAN, Secretary and Solicitor.

47, Finsbury-circus, London, E.C., May 19, 1882.

RICHMOND CONSOLIDATED MINING COMPANY (LIMITED).

Notice is hereby given, that the ORDINARY GENERAL MEETING of the shareholders of the Richmond Consolidated Mining Company (Limited) will be HELD at the City Terminus Hotel, Cannon-street, London, on THURSDAY, the 1st day of June, 1882, at Twelve o'clock at noon, to receive the report of the directors and the statement of accounts for the year ending 28th February 1882, and to transact the general business of the company. The Transfer Books will be closed on 31st May and 1st June.

By order of the Board, HUBERT AKERS, Secretary.

44, Coleman-street, E.C., 22nd May, 1882.

THE WYNAAD REDUCTION AND SMEETING CORPORATION

(LIMITED).

Capital, £250,000, in 250,000 shares of £1 each.

First issue, £150,000.

Payable—5s. on application, 5s. on allotment, 10s. three months after allotment.

DIRECTORS.

H. PALMER-STONE, Esq., J.P., Chairman of South-East Wynaad Estates and Gold Mining Company (Limited). J. SCARLETT CAMPBELL, Esq., Chairman of Indian Consolidated Gold Company (Limited); Chairman of Indian Trevelyan Gold Mining Company (Limited). ARTHUR HALL, Esq., Chairman of Wynaad Perseverance Estate and Gold Mining Company (Limited). Major GENERAL AGNEW, Chairman of Indian Phoenix Gold Mining Company (Limited). J. TURNER HOPWOOD, Esq., J.P., Director of Indian Glenrock Gold Mining Company (Limited). E. NIXON BINNEY, Esq., Director of Wentworth Gold Mining and Indian Estates Company (Limited). H. T. STAINES, Esq., Director of Indian Gold Estates Purchasing Company (Limited).

SOLICITORS.

Messrs. NEWMAN, STRETTON, HILLIARD, and WILLIS, 75, Cornhill.

AUDITORS—Messrs. HARDING, WHINNEY, and CO., 8, Old Jewry. BANKERS—IMPERIAL BANK (Limited), 6, Lothbury, E.C.

SECRETARY—W. H. THOMPSON.

OFFICES—1, QUEEN VICTORIA STREET, E.C.

This Corporation is formed to establish works in the Wynaad Gold district of India for the Reduction or Smelting of Ores. It purposes to offer Mining Companies a market at once on the spot, and to deal with ores on a large scale with the powerful machinery and more scientific methods which this Corporation will command when devoted to this purpose exclusively.

Prospectuses and Forms of Application for Shares, and the Reports of Messrs. THOMAS RICKARD, J. W. MINCHIN, OLIVER PEGLER, and W. KING, can be obtained at the Offices of the Company, or from the Bankers and Solicitors.

Crown 8vo., cloth, price Five Shillings.

THE PRINCIPLES OF COLLIERY VENTILATION:

By ALAN BAGOT, Assoc. M. Inst. C. E.

Author of "Accidents in Mines."

SECOND EDITION, GREATLY ENLARGED.

LONDON:
KEGAN PAUL, TRENCH, AND CO., 1, Paternoster Square.

INTERIM REPORT OF THE DIRECTORS OF THE STANDARD DIAMOND MINING COMPANY, KIMBERLEY MINE (LIMITED).

Your directors have much pleasure in submitting an interim report on the affairs of the company, accompanied by a statement of accounts made up to April 8th, 1882.

In directing your attention to the annexed accounts they have to report that the profits of the company would have been much greater had not an extensive fall of reef in February last hindered the hauling of blue ground to a very considerable extent. Since the fall, 40,199 loads of reef have been removed, previous to that time, 20,479 loads, making a total of 60,678 loads.

Your directors are confident that before the end of the present month nearly the whole of the company's claims will be free of fallen reef, and they anticipate most favourable results from the next term's operations.

By reference to the accounts, it will be seen that the net profits of the company amount to 37,331. 19s. 7d.; consequently, the directors have decided to declare a dividend of 10 per cent., which will absorb 34,360s., leaving 3178. 19s. 7d. to be carried to the credit of next accounts.

There are at present some 3500 loads of blue ground on the company's floors, and which is being added to daily. These loads may be taken to be worth 40s. a load, the company having washed 37,209 loads, and which produced, without taking into consideration the diamonds recovered, 70,133. 15s. 8d.

The dividend will be payable at the company's office on Tuesday, 25th April.

J. B. ROBINSON, Chairman.
D. R. HURLEY,
S. LANGE,
H. F. PISTORIUS,
A. A. ROTHSCHILD,
E. W. TARRY,

Directors.

STANDARD DIAMOND MINING COMPANY, KIMBERLEY MINE (LIMITED).

BALANCE SHEET, 8TH APRIL, 1882.

LIABILITIES.			
To capital stock	£243,600	0	0
Unclaimed dividends	186	0	0
Fletcher	1	0	0
Profit and loss	37,538	19	7
ASSETS.			
By claim account	£381,325	19	7
Machinery and plant account	£318,000	0	0
New machinery and plant account	25,005	6	6
Office furniture	5,844	18	1
Sundry accounts	131	2	6
Bills receivable	108	9	0
Beef tickets	7,341	0	6
Diamonds on hand (since sold)	1,358	13	1
Cash at bank and in hands of secretary	18,502	15	9
	4,535	14	2
	£381,325	19	7

We hereby certify that we have examined and compared the books, vouchers, and bank books of the company, and that this statement is a true and correct extract from the books of the company.

F. B. SALOMONS, Acting Secretary.
JAMES WILSON,
CHAS. F. J. MARTELL, Auditors.

PROFIT AND LOSS ACCOUNT, 8TH APRIL, 1882.

Dr.—To charges	£	883	7	2
Forage account	1,445	13	5	
Interest	332	1	6	
Rates and licenses	12,730	2	8	
Brokerage	623	9	0	
Cartage	1,339	0	2	
Dividends	25,770	0	0	
Wood account	5,803	7	5	
Wages account	16,947	11	0	
Working expenses	4,622	14	9	
Balance	37,538	19	7	
	£108,036	8	8	

Cr.—By balance	£	25,232	0	5
Diamond account	82,804	8	3	
	£108,036	8	8	

We hereby certify that we have examined and compared the books, vouchers, and bank books of the company, and that this statement is a true and correct extract from the books of the company.

JAMES WILSON,
CHAS. F. J. MARTELL, Auditors.

LONDON AGENTS: M. MARCUS AND C. NORTH, 56, Holborn Viaduct.

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This Turbine is applicable to all heights of fall. It works immersed in the tail-water, so that no part of the fall is lost, and the motion of the Wheel is not affected by floods or back-water.

References to places where it is at work will be given on application to—

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TABLE OF THE ORDER OF SUPERPOSITION OF BRITISH ROCKS, showing the SYSTEMS, FORMATIONS, GROUPS OF STRATA, CHARACTERISTIC ROCKS, PREVALENT MINERALS, and TYPICAL FOSSILS.

By T. A. READWIN, F.G.S., M.M.S., &c.

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JAMES BROWNING.

St. Johns, Newfoundland, April 17, 1882

THE GREAT SOUTHERN AND WESTERN RAILWAY COMPANY (IRELAND) have the following STATIONARY ENGINES FOR SALE:—

ONE LARGE VERTICAL ENGINE, with two cylinders, 1 ft. 7½ in. diameter by 2 ft. 6 in. stroke, with spur fly wheel 15 ft. 6 in. diameter, slow speed governor, and two feed pumps.

ONE SINGLE-CYLINDER BEAM ENGINE, cylinder 1 ft. 8½ in. diameter, 3 ft. 6 in. stroke, with cast-iron beam, fly wheel 13 ft. 6 in. diameter, one feed pump, slow speed governors.

The engines have only recently been taken to pieces, and are in good working condition.

Also, TWO CORNISH BOILERS, plates 7-16ths in. thick, length over all 15 ft. 2½ in., diameter 5 ft. 4 in., diameter of flue 2 ft. 7½ in.

Further particulars, with an outline diagram of each engine, may be obtained at the Company's Locomotive Works, Inchicore, Dublin, where the engines can be seen any day between Ten A.M. and Four P.M., except Saturday.

MESSRS. WM. DEW AND SON WILL SELL, BY PUBLIC AUCTION, at the Gwydyr Hotel, Bettws-y-Coed, on Friday, the 15th day of June, 1882, at Four o'clock in the afternoon, prompt, subject to conditions then and there to be produced, all that

EXTENSIVE SLATE QUARRY,

The property of the Capel Curig Slate and Slab Quarry Company (Limited) situate about four miles from Bettws-y-Coed.

Lithographed plans, full particulars, and samples of the slates may be had of Messrs. MARK OGDEN and SON, 21, Cannon-street, and Messrs. BOOTE and EDGAR, Solicitors, Booth-street, Manchester; and the Auctioneers, Wellfield House, Bangor, and Town Hall, Rhyl.

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TO BE SOLD, BY PRIVATE CONTRACT, a very large quantity of MINING PLANT belonging to the late Lessees of HURST MINES, in the parish of Murrick, near Richmond and Reeth, in the North Riding of Yorkshire:—

ONE 15 horse power HYDRAULIC ENGINE, with 6 and 7 in. Pressure Pipes, 6 in. Pumps, &c.

A first-class OVERSHOT WATER WHEEL, 27 ft. diameter, 3½ ft. breast, with Crushing Mill attached.

ONE ditto, 22 ft. diameter, 3½ ft. breast, with Crushing Mill attached.

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NOTICE IS HEREBY GIVEN, that an EXAMINATION for MANAGERS' CERTIFICATES OF COMPETENCY, under the above-named Act, will be HELD on the 13th day of June, and CANDIDATES INTENDING TO PRESENT THEMSELVES AT SUCH EXAMINATION must, on or before the 5th day of June next, notify such intention to the Secretary of the Board of the above-mentioned District, from whom all information as to particulars can be obtained.

By order of the Board,
JOHN R. JEFFERY, Secretary.
N.B.—Persons who do not reside within the District are equally eligible for examination with those who do.

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23rd May, 1882. F. ANDREWS.

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(Signed) VICTOR T. GRILLET Treasurer.

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C. GRAINGER, Secretary.

50, Old Broad-street, London, 23rd May, 1882.

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I am now giving it to my son, twelve years of age, whom we have always thought consumptive, and from a puny ailing boy he seems to be fast growing into a strong healthy lad.

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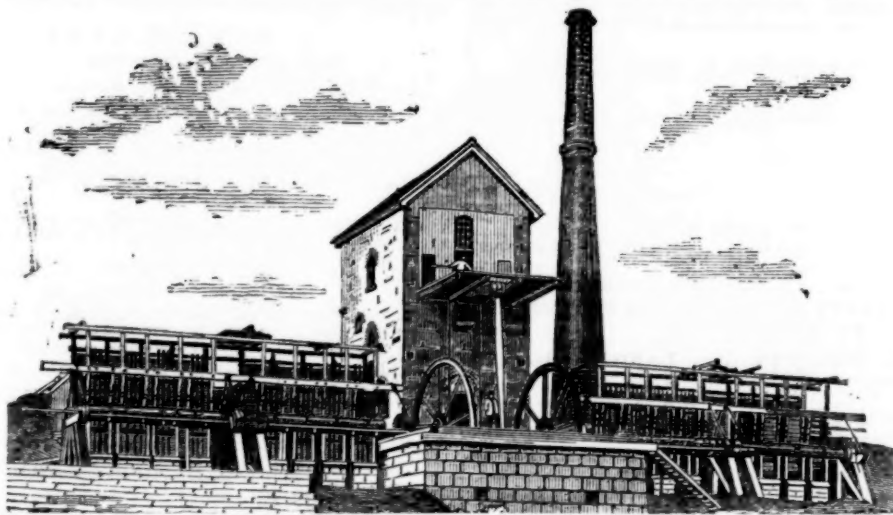
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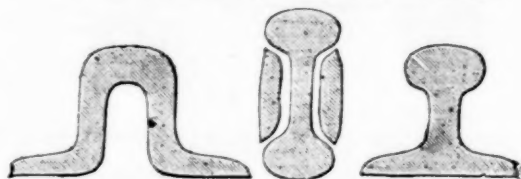
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home prices. As to care taken in reporting, reference is made to the Mining Journal
Supplement, April 1, 1876, containing a report on property of the Maxwell Land
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6000 Carn Brea, t, c, Illogan	9 7 1/2	12 1/2	12 1/2	12 1/2	52 11	0 0	10	0	May 1881
10240 Devon Gt. Consols, c, a, Tavistock	1 0	0	7 1/2	7 1/2	118 7	0 0	0	0	Dec. 1880
4296 Deolath, c, t, Camborne	10 14	10	7 1/2	65 70	129 13	0 0	2	0	May 1882
6400 East Pool, t, c, Illogan	0 9	5	50 55	29 11	0 0	2	0	0	Apr. 1882
12500 Frognock, t, c, Illogan	0 0	0	5 1/2	2 3	0 0	0	0	0	Jan. 1881
12000 Great Laxey, t, c, Illogan	5 0	0	5 1/2	23 4	0 0	0	0	0	Apr. 1882
10000 Green Hurl, t, c, Illogan	0 0	0	17 1/2	31 11	0 0	0	0	0	Apr. 1882
20000 Grogwin, t, c, Illogan	0 0	0	3 1/2	0 16	4 0	0 0	1	0	Mar. 1882
10240 Gunnislake (Cliffers), t, c	2 2	0	2 1/2	0 19	9 0	0 0	2	0	Mar. 1882
2800 Isle of Man, t, c, Illogan	25 0	0	0	83 5	0 0	1	0	0	Sept. 1880
6000 Killfret, t, c, Illogan	4 6	5 1/2	4 1/2	0 2	6 0	0 0	2	0	May 1882
20000 Leadhill, t, c, Illogan	6 0	0	2 1/2	0 15	0 0	0	0	0	Mar. 1882
430 Lisburne, t, c, Illogan	18 15	0	0	612 10	0 0	1	0	0	Mar. 1882
10000 Mellanear, t, c, Illogan	2 6	0	4 1/2	69 3	0 0	1	0	0	Feb. 1882
9000 Minera Mining Co., t, c, Illogan	0 0	0	4 1/2	24 0	0 0	2	0	0	Jan. 1880
20000 Mining Co. of Ireland, t, c, Illogan	5 0	0	4 5	0 10	0 0	0	0	0	July 1880
8000 Moss, t, c, Illogan	5 0	0	0	3 14	0 0	2	0	0	Nov. 1881
11820 North Hendre, t, c, Illogan	2 10	0	0	0 9	0 0	1	0	0	Nov. 1881
8146 Ditto	1 5	0	0	0 9	0 0	1	0	0	Nov. 1881
20000 North Levant, t, c, St. Just	13 6	0	4 1/2	4 16	0 0	3	0	0	Jan. 1881
4760 Penhall, t, c, St. Agnes	4 0	0	0	3 17	0 0	1	0	0	Mar. 1882
6000 Pennant, t, c, North Wales	5 0	0	4 1/2	0 10	0 0	0	0	0	Mar. 1882
12000 Phoenix United, t, c, Llaninhorne	6 0	3	2 1/2	17 2	0 0	2	0	0	May 1882
18000 Pr. Patrick, t, c, Llaninhorne	2 0	0	0	0 13	0 0	2	0	0	July 1880
12000 Red Rock, t, c, Llaninhorne	2 0	0	0	0 4	0 0	2	0	0	Jan. 1881
12000 Roman Gravel, t, c, Llaninhorne	7 10	0	9 1/2	9 1	0 0	5	0	0	May 1882
4000 Rhydalun, t, c, Llaninhorne	10 0	0	0	0 5	0 0	5	0	0	Feb. 1880
512 South Caradon, t, c, Llaninhorne	1 5	0	20	15 20	749 3	0 0	1	0	July 1880
6123 South Condurrow, t, c, Llaninhorne	6 5	0	8 1/2	8 1/2	9 3	0 0	0	0	Apr. 1882
9000 South Darren, t, c, Llaninhorne	1 10	0	0	0 4	0 0	2	0	0	Apr. 1880
4500 South Wheal Frances, t, c, Llaninhorne	7 12	0	12 1/2	10 1/2	40 15	0 0	10	0	July 1880
6000 Tincroft, t, c, Llaninhorne	11 10	0	11 1/2	14 1/2	51 3	0 0	2	0	Oct. 1880
15000 Van, t, c, Llaninhorne	4 5	0	6 1/2	5 1/2	0 1	0 0	1	0	Oct. 1880
12000 West Holway, t, c, Llaninhorne	9 8	0	17 1/2	12 1/2	33 0	0 0	1	0	Jan. 1881
12000 West Wheal Seton, t, c, Llaninhorne	30 0	0	32 1/2	37 1/2	223 0	0 0	7	0	Apr. 1882
6000 West Basset, t, c, Llaninhorne	7 0	0	11 1/2	11 1/2	28 3	0 0	8	0	Apr. 1882
12000 Wheal Crebor, t, c, Llaninhorne	2 4	0	3 1/2	2 1/2	0 13	0 0	1	0	Mar. 1882
10240 Wheal Eliza Consols, t, c, Austell	13 0	0	0	42 10	0 0	8	0	0	Aug. 1880
15000 Wheal George, t, c, Llaninhorne	1 0	0	0	3 3 1/2	0 1	0 0	1	0	Feb. 1882
6000 Wheal Grenville, t, c, Llaninhorne	15 0	0	10 1/2	10 1/2	1 7	0 0	7	0	May 1882
4295 Wheal Killy, t, c, St. Agnes	5 9	0	1 1/2	1 1/2	12 18	0 0	6	0	Jan. 1881
3000 Wheal Pevor, t, c, Redruth	7 11	0	10 1/2	10 11	8 13	0 0	4	0	Mar. 1882

FOREIGN DIVIDEND MINES.

Shares.	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.			
135000 Almaden, t, Spain	2 0	0	1 1/2	1 1/2	2 5	0 0	1	0	Mar. 1882
130000 Almaden and Tinto Consols, t, Spain	1 0	0	1 1/2	1 1/2	0 6	0 0	1	0	May 1876
20000 Australian, t, South Australia	7 7	0	1 1/2	1 1/2	1 5	0 0	2	0	Aug. 1881
15000 Birdseye Creek, t, California	4 0	0	1 1/2	1 1/2	0 18	0 0	0	0	June 1881
20000 Cape Copper Mining, t, South Africa	7 0	0	51	50 52	45 7	0 0	1	0	Mar. 1882
50000 Copiapo, t, Chile (24 shares)	3 8	0	3 1/2	3 1/2	1 16	0 0	1	0	Mar. 1882
20000 English and Australian, t, c, S. Aust.	2 10	0	1 1/2	1 1/2	3 0	0 0	1	0	Mar. 1882
2000 Eng.-Aus., t, c, Vict. (20000 o.)	1 0	0	0	0	0 3	0 0	0	0	Apr. 1882
25000 Fortuna, t, Spain	2 0	0	4 1/2	4 1/2	8 1	0 0	2	0	Jan. 1881
60000 Frontino and Bolivia, t, New Granada	2 0	0	2 1/2	2 1/2	0 8	0 0	2	0	Jan. 1881
200000 La Plata, t, Leadville	2 0	0	2 1/2	2 1/2	0 11	0 0	3	0	June 1882
15000 Linars, t, Spain	3 0	0	4 1/2	4 1/2	18 10	0 0	2	0	Mar. 1882
65000 New Quebrada, t, Venezuela	5 0	0	4 1/2	4 1/2	0 5	0 0	6	0	July 1881
1000 Ditto, Debutentes	100 0	0	98	93 98	6	0	0	0	Dec. 1880
3000 Oregon, t, Oregon, U.S. (pref. sh.)	4 0	0	0	0	0 2	0 0	2	0	Dec. 1880
50000 Pampulico, t, Chile	4 0	0	6 1/2	6 1/2	1 0	0 0	4	0	May 1882
25000 Pitanguy, t, Brazil (in 6000 £1 pd.)	0 10	0	0	0	0 1	0 0	0	0	Sept. 1880
10000 Pontgouard, t, France	20 0	0	13	11 13	25 17	0 0	2	0	Dec. 1880
100000 Port Phillip, t, Victoria	1 0	0	9 1/2	9 1/2	1 14	0 0	0	0	Jan. 1881
50000 Rara Fortuna, t, Argent. Republic	1 0	0	0	0	0 2	0 0	1	0	Jan. 1882
54000 Richmond Consol., t, Nevada	5 0	0	7 1/2	7 1/2	13 11	0 0	10	0	Feb. 1882
24320 Rio Tinto, t, c, Mortgage Bonds, Huelva	100 0	0	104	102 104	5	0	0	0	July 1880
25000 Ditto, shares	10 0	0	26	25 25 1/2	1 12	0 0	0	0	Apr. 1882
40000 Santa Barbara, t, Brazil	0 10	0	0	0	0 12	0 0	1	0	May 1882
120000 Scottish-Australian Mining Co., t	1 0	0	1 1/2	1 1/2	10 p. cent.	0 0	0	0	Apr. 1882
80000 Ditto, New	0 10	0	0	0	0 p. cent.	0 0	0	0	Apr. 1882
50000 Sentein, t, c, Brazil	1 0	0	0	0	0 2	0 0	2	0	Apr. 1882
22500 Sierra Butte, t, California	2 0	0	1 1/2	1 1/2	2 4	0 0	1	0	Apr. 1882
40525 Ditto, Plumas Eureka	2 0	0	1 1/2	1 1/2	2 16	0 0	3	0	Apr. 1882
233000 St. John del Rey (45 St. John del Rey multiples dealt in)	170 180	0	0	0	5 p. cent. half year, Dec. 1881	0 0	0	0	Dec. 1881
91956 Tharisa, t, c, Spain (31100 s. 74 p.)	10 0	0	42	41 42 1/2	31 6	0 0	2	0	May 1882
20000 Toluca, t, c, Colombia	5 0	0	3	2 1/2	2 1	0 0	5	0	Dec. 1881
25000 Victoria (London), t, c, Australia	1 0	0	0	0	0 13	0 0	10	0	Feb. 1881
100000 Victorina (Nevada, U.S.) Deb. Bds.	1 0	0	0	0	0 6	0 0	0	0	Sept. 1881
15000 Western Andes, t, c, U.S.	1 0	0	0	0	3 14	0 0	2	0	Mar. 1882
2100 W. Prussian (55000 pref. sh. £10 pd.)	10 0	0	10	9 10	2 0	0 0	8	0	Apr. 1881

* Have made calls since last dividend was paid.

NON-DIVIDEND BRITISH MINES.

Shares.	Paid.	Last wk.	Clos. pr.			
30000 Alston United, t, c, Cumberland	1 0	0	0	0	0	0
12000 Asheton, t, c, Carnarvonshire	5 0	0	0	0	0	0
11883 Bedford Unit, t, c, Tavis (21 sh.)	0 0	0	2 1/2	1 1/2	2	0
20000 Bodriah, t, c, Wrexham	1 0	0	0	0	0	0
20000 British, t, c, Wrexham	1 0	0	1 1/2	1 1/2	1	0
30000 Beuno Consols, t, c, Flintshire	1 0	0	1 1/2	1 1/2	1	0
20000 Bwch United, t, c, Cardigan	0 17	6	0	0	0	0
50000 Cambrian, t, c, Cardigan	2 0	0	0	0	0	0
50000 Carn Carnarvon, t, c, Carnarvon	1 0	0	1 1/2	1 1/2	1	0
20000 Carnarvonshire Cons., t, c, Llanrwst	1 0	0	1 1/2	1 1/2	1	0
37500 Carnarvonshire Cons., t, c, Llanrwst	1 0	0	1 1/2	1 1/2	1	0
30000 Capella Consols, t, c, St. Stephens	1 0	0	0	0	0	0
6000 Cathedral Cons., t, c, Gwynedd	1 0	0	0	0	0	0
20000 Central Fawcett, t, c, Isle of Man	1 17	6	0	0	0	0
25000 Coed-y-Fedw & Pant-y-Buarth, t, c	1 0	0	1 1/2	1 1/2	1	0
2450 Cook's Kitchen, t, c, Illogan	30 14	9	37 1/2	32 1/2	37 1/2	0
10000 Cornwall Great Cons., (4500 issued)	1 0	0	0	0	0	0
6400 Crook Burn, t, c, Cumberland	0 17	0	0	0	0	0
14000 Crosswood Mining Lands, t, c	1 0	0	0	0	0	0
45000 D'Eresby Mountain, t, c, Llanrwst	0 10	0	1 1/2	1 1/2	1	0
20000 Denbighshire Consolidated, t, c	3 0	0	1 1/2	1 1/2	1	0
12000 Durham, t, c, Durham	1 0	0	1 1/2	1 1/2	1	0
50000 Devon, t, c, Tavistock	1 0	0	0	0	0	0
60000 Devon Friendship, t, c, Tavistock	1 0	0	0	0	0	0
12000 Devon Great United, (21 shares)	1 5	0	0	0	0	0
50000 Drakeville, t, c, Calstock	0 15	0	0	0	0	0
10000 Dubby Syke, t, c, Durham	1 0	0	0	0	0	0
12000 East Blue Hills, t, c, St. Agnes	0 15	0	0	0	0	0
8000 East Botallack, t, c, St. Just	0 10	0	0	0	0	0
6144 East Caradon, t, c, Llaninhorne	8 6	0	0	0	0	0
4000 East Chiverton, t, c, Perranarabud	10 12	3	0	0	0	0
30000 East Craven Moor, t, c, Pateley Bridge	1 0	0	0	0	0	0
15000 East Devon Cons., t, c, Buckfastleigh	2 0	0	0	0	0	0
30000 East Herodfoot, t, c, Liskeard	1 0	0	0	0	0	0
20000 East Long Rake, t, c, Wales	1 0	0	0	0	0	0
21000 East Roman Gravel, t, c, Salop	0 15	0	0	0	0	0
18000 East Van, t, c, Llanidloes	5 0	0	0	0	0	0
2048 East Wheal Lovell, t, c, Helston	15 13	6	1 1/2	1 1/2	1	0
10000 East Wheal Rose, t, c, Newlyn East	1 0	0	0	0	0	0
4000 East Wheal Rose, t, c, Newlyn East	1 18	0	0	0	0	0
4000 Glasgow, t, c, (300000 £1 pd., 10000 15s. pd.)	1 0	0	0	0	0	0
14000 Glenroy, t, c, Isle of Man	4 0	0	0	0	0	0
30000 Goggin, t, c, Dartmoor	1 0	0	0	0	0	0
10000 Goddards, t, c, Carnarvon	1 0	0	1 1/2	1 1/2	1	0
32000 Goggin, t, c, Cardigan	1 0	0	1 1/2	1 1/2	1	0
25000 Gorsever, t, c, St. Cleer	1 0	0	1 1/2	1 1/2	1	0
8000 Gorsever and Merilyn Con., t, c, Flint	2 10	0	2 1/2	2 1/2	2	0
20000 Great Dylliff, (10000 sh. issued)	1 0	0	0	0	0	0
10000 Great Dylliff, (10000 sh. issued)	1 0	0	0	0	0	0
6000 Great Fawcett, t, c, St. Agnes	0 5	0	0	0	0	0
10000 Gwyn-y-Mynydd, t, c, Flint (pref.)	4 0	0	1	1 1/2	1	0
7000 Gwydyr Amal, t, c, Carnarvon	1 0	0	0	0	0	0
12000 Herodfoot, t, c, near Liskeard	0 18	0	0	0	0	0
18000 Hington Down, t, c, Calstock	0 12	0	1	1 1/2	1	0
20000 Kirkcubbin, t, c, (20000 unissued)	1 0	0	0	0	0	0
25000 Kit Hill Gt. Cons., t, c, (21 sh.)	0 15	0	0	0	0	0
15000 Lady Ann, t, c, Llaninhorne	1 0	0	0	0	0	0